P R O J E C T N O T E

To: Jard Company Inc. Hazard Ranking System Project File

From: John Burton, Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team III (START)

Thru: Mr. John F. Kelly, Project Leader, START

Date: 2 October 2013

RE: Source, Surface Soil, and Sediment Sample Sample-Adjusted Contract Required Quantitation Limit Calculations and Form Is
Case 43392; SDG A4B36
TDD No. 13-09-0001; Task No. 0904-48; DC No. A-6869

Introduction

The following Project Note describes the sample-adjusted Contract Required Quantitation Limit (CRQL) calculations for polychlorinated biphenyls (PCBs) analytical results of 18 source samples collected from the Jard Company Inc. property located in Bennington, Bennington County, Vermont. The samples were collected by Weston Solutions, Inc. (WESTON®), Superfund Technical Assessment and Response Team III (START) for the purpose of performing a Site Reassessment in support of a U.S. Environmental Protection Agency (EPA) Hazard Ranking System (HRS)/National Priorities List (NPL) Documentation Record. The analytical data were validated at a Tier II level according to Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses and the USEPA CLP National Functional Guidelines for Superfund Organic Methods.

Table 1 of this Project Note summarizes the validated analytical results for PCB analysis. Table 2 of this Project Note reports the sample-adjusted CRQL for each sample, which is either the CRQL or a raised value due to the dilution factor, percent solids, sample volume, and/or final volume. Tables 1 and 2 are included in *Attachment A* of this Project Note. The memorandum detailing the original validated results is included in *Attachment B* of this Project Note.

Copies of the pertinent Form I's have been included in *Attachment C* of this Project Note. CRQLs are listed in the *USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-media Multi-concentration, SOM01.1,* and the *Modifications Updating SOM01.1 to SOM01.2*, for PCBs, the pertinent portions of which are included in *Attachment D* of this Project Note.

Sample-adjusted CRQL Determination for Soil/Source and Sediment Samples:

The sample-adjusted CRQLs were calculated as follows: the PCB sample-adjusted CRQLs [in micrograms per kilogram (µg/Kg)] was calculated by multiplying the CRQL (in µg/Kg) for the substance by the method extraction weight [30 grams (g) nominally], dividing this result by the dry weight extracted (in g), and multiplying this result by the dilution factor. The dry weight extracted (in g) is calculated by multiplying the percent solids, expressed as a decimal, of the sample (100% - percent moisture) by the wet weight extracted (in g) of the sample. The percent moisture, wet weight extracted, and dilution factors are reported on the Form I for the sample.

$$\text{Sample-adjusted CRQL (µg/Kg)} = \frac{[\text{CRQL} \times 30\text{g}]}{[\%\text{S} \times W_W]} \times \text{DF}$$

CRQL = in µg/Kg
W_W = wet weight extracted (g)
%S = Percent Solids (in decimal form)
DF = Dilution Factor

Attachment A

Tables

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

		SAMPLE NUMBER	A4B36	A4B37	A4B38	A4B39	A4B40	A4B41	A4B42
		SAMPLE LOCATION	SO-45	SO-201	SO-57	SO-92	SO-61	SO-52	SO-53
		STATION LOCATION	JCS-060	JCS-476	JCS-072	JCS-126	JCS-182	JCS-069	JCS-084
		LABORATORY NUMBER	E1903-04	E1903-05	E1903-06	E1903-15	E1903-16	E1903-17	E1903-18
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1221	7.8	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1232	1.3	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1242	6.2	33	350 J	170 J	250	1100 *	1200 *	630 *J	700 *J
Aroclor-1248	2.7	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1254	3.2	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1260	3.2	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1262	14	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1268	6.6	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
		DILUTION FACTOR	1.0	1.0	1.0	1.0 / 10.0*	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*
		DATE SAMPLED	4/4/2013	4/4/2013	4/4/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013
		DATE EXTRACTED	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
		DATE ANALYZED	4/26/2013	4/25/2013	4/25/2013	5/2/2013	4/26/2013	4/26/2013	4/26/2013
		SAMPLE WEIGHT (GRAMS)	30.1	30.1	30.1	30	30	30.1	30
		% SOLID	86.6	82.9	73.3	78.0	81.1	67.8	88.4

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

	SAMPLE NUMBER		A4B43	A4B44	A4B45	A4B46	A4B47	A4B48	A4B49
	SAMPLE LOCATION		SO-91	SO-85	SO-24	SO-25	SO-28	SO-29	SO-31
	STATION LOCATION		JCS-125	JCS-116	JCS-078	JCS-029	JCS-039	JCS-040	JCS-043
	LABORATORY NUMBER		E1903-07	E1903-01	E1903-19	E1903-20	E1903-21	E1903-22	E1903-10
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1221	7.8	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1232	1.3	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1242	6.2	33	110	1200 *	1100 *	2000 *	1000 *J	1800 *	1100 *
Aroclor-1248	2.7	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1254	3.2	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1260	3.2	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1262	14	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1268	6.6	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
DILUTION FACTOR			1.0	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 5.0*
DATE SAMPLED			4/8/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
DATE EXTRACTED			4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
DATE ANALYZED			4/25/2013	4/26/2013	4/26/2013	4/26/2013	4/26/2013	4/27/2013	4/26/2013
SAMPLE WEIGHT (GRAMS)			30	30	30	30.0	30	30	30
% SOLID			85.9	83.3	90.8	83.5	92.7	91.7	89.6

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

		SAMPLE NUMBER	A4B50	A4B51	A4B52	A4B53			
		SAMPLE LOCATION	SO-31	SO-30	SB-01	SB-03			
		STATION LOCATION	JCS-044	JCS-042	JCS-131	JCS-135			
		LABORATORY NUMBER	E1903-11	E1903-12	E1903-13	E1903-14			
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	39 U	38 U	43 U	360 U			
Aroclor-1221	7.8	33	39 U	38 U	43 U	360 U			
Aroclor-1232	1.3	33	39 U	38 U	43 U	360 U			
Aroclor-1242	6.2	33	3500 *	7300 *	160000 *	180000 *			
Aroclor-1248	2.7	33	39 U	38 U	43 U	360 U			
Aroclor-1254	3.2	33	39 U	38 U	43 U	360 U			
Aroclor-1260	3.2	33	39 U	38 U	43 U	360 U			
Aroclor-1262	14	33	39 U	38 U	43 U	360 U			
Aroclor-1268	6.6	33	39 U	38 U	43 U	360 U			
DILUTION FACTOR			1.0 / 10.0*	1.0 / 100.0*	1.0 / 500.0*	10.0 / 500.0*			
DATE SAMPLED			4/4/2013	4/4/2013	4/1/2013	4/1/2013			
DATE EXTRACTED			4/22/2013	4/22/2013	4/22/2013	4/22/2013			
DATE ANALYZED			4/26/2013	4/26/2013	4/26/2013	4/26/2013			
SAMPLE WEIGHT (GRAMS)			30	30.1	30.1	30			
% SOLID			84.4	87.0	77.2	90.5			

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
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SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 2
SAMPLE ADJUSTED CRQL
µg/Kg

		SAMPLE NUMBER	A4B36	A4B37	A4B38	A4B39	A4B40	A4B41	A4B42
		SAMPLE LOCATION	SO-45	SO-201	SO-57	SO-92	SO-61	SO-52	SO-53
		STATION LOCATION	JCS-060	JCS-476	JCS-072	JCS-126	JCS-182	JCS-069	JCS-084
		LABORATORY NUMBER	E1903-04	E1903-05	E1903-06	E1903-15	E1903-16	E1903-17	E1903-18
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38	40	45	42	41	49	37
Aroclor-1221	7.8	33	38	40	45	42	41	49	37
Aroclor-1232	1.3	33	38	40	45	42	41	49	37
Aroclor-1242	6.2	33	38	40	45	420 *	200 *	480 *	370 *
Aroclor-1248	2.7	33	38	40	45	42	41	49	37
Aroclor-1254	3.2	33	38	40	45	42	41	49	37
Aroclor-1260	3.2	33	38	40	45	42	41	49	37
Aroclor-1262	14	33	38	40	45	42	41	49	37
Aroclor-1268	6.6	33	38	40	45	42	41	49	37
		DILUTION FACTOR	1.0	1.0	1.0	1.0 / 10.0*	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*
		DATE SAMPLED	4/4/2013	4/4/2013	4/4/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013
		DATE EXTRACTED	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
		DATE ANALYZED	4/26/2013	4/25/2013	4/25/2013	5/2/2013	4/26/2013	4/26/2013	4/26/2013
		SAMPLE WEIGHT (GRAMS)	30.1	30.1	30.1	30	30	30.1	30
		% SOLID	86.6	82.9	73.3	78.0	81.1	67.8	88.4

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
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SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 2
SAMPLE ADJUSTED CRQL
µg/Kg

		SAMPLE NUMBER	A4B43	A4B44	A4B45	A4B46	A4B47	A4B48	A4B49
		SAMPLE LOCATION	SO-91	SO-85	SO-24	SO-25	SO-28	SO-29	SO-31
		STATION LOCATION	JCS-125	JCS-116	JCS-078	JCS-029	JCS-039	JCS-040	JCS-043
		LABORATORY NUMBER	E1903-07	E1903-01	E1903-19	E1903-20	E1903-21	E1903-22	E1903-10
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38	40	36	39	36	36	37
Aroclor-1221	7.8	33	38	40	36	39	36	36	37
Aroclor-1232	1.3	33	38	40	36	39	36	36	37
Aroclor-1242	6.2	33	38	200 *	360 *	390 *	360 *	360 *	180 *
Aroclor-1248	2.7	33	38	40	36	39	36	36	37
Aroclor-1254	3.2	33	38	40	36	39	36	36	37
Aroclor-1260	3.2	33	38	40	36	39	36	36	37
Aroclor-1262	14	33	38	40	36	39	36	36	37
Aroclor-1268	6.6	33	38	40	36	39	36	36	37
		DILUTION FACTOR	1.0	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 5.0*
		DATE SAMPLED	4/8/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
		DATE EXTRACTED	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
		DATE ANALYZED	4/25/2013	4/26/2013	4/26/2013	4/26/2013	4/26/2013	4/27/2013	4/26/2013
		SAMPLE WEIGHT (GRAMS)	30	30	30	30.0	30	30	30
		% SOLID	85.9	83.3	90.8	83.5	92.7	91.7	89.6

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
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SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 2
SAMPLE ADJUSTED CRQL
µg/Kg

	SAMPLE NUMBER		**A4B50**	**A4B51**	**A4B52**	**A4B53**			
	SAMPLE LOCATION		**SO-31**	**SO-30**	**SB-01**	**SB-03**			
	STATION LOCATION		**JCS-044**	**JCS-042**	**JCS-131**	**JCS-135**			
	LABORATORY NUMBER		**E1903-11**	**E1903-12**	**E1903-13**	**E1903-14**			
COMPOUND	**MDL**	**CRQL**							
Aroclor-1016	**2.6**	**33**	39	38	43	360			
Aroclor-1221	**7.8**	**33**	39	38	43	360			
Aroclor-1232	**1.3**	**33**	39	38	43	360			
Aroclor-1242	**6.2**	**33**	390 *	3800 *	21000 *	18000 *			
Aroclor-1248	**2.7**	**33**	39	38	43	360			
Aroclor-1254	**3.2**	**33**	39	38	43	360			
Aroclor-1260	**3.2**	**33**	39	38	43	360			
Aroclor-1262	**14**	**33**	39	38	43	360			
Aroclor-1268	**6.6**	**33**	39	38	43	360			
	DILUTION FACTOR		1.0 / 10.0*	1.0 / 100.0*	1.0 / 500.0*	10.0 / 500.0*			
	DATE SAMPLED		4/4/2013	4/4/2013	4/1/2013	4/1/2013			
	DATE EXTRACTED		4/22/2013	4/22/2013	4/22/2013	4/22/2013			
	DATE ANALYZED		4/26/2013	4/26/2013	4/26/2013	4/26/2013			
	SAMPLE WEIGHT (GRAMS)		30	30.1	30.1	30			
	% SOLID		84.4	87.0	77.2	90.5			

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

Attachment B

Data Validation Memorandum
Case No. 43392; SDG No. A4B36

Weston Solutions, Inc.
East Division
3 Riverside Drive
Andover, Massachusetts 01810
978-552-2100 - Fax 978-658-0700

SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM
EPA CONTRACT EP-W-05-042

21 August 2013
20114-081-998-0850-49
DC No. A-6843

Ms. Martha Bosworth
U.S. EPA Region I - New England
Emergency Planning & Response Branch
5 Post Office Square, Suite 100
Mail Code OSRR07-2
Boston, Massachusetts 02109-3912

Subject: Case No. 43392; SDG No. A4B36
ChemTech Consulting Group (Chem)
Jard Company Inc
Bennington, Vermont
AROCLOR: 18/Soil/A4B36-A4B53
(Field Duplicates A4B36/A4B37)
4/Aqueous Equipment Blanks/A4B02, A4B06, A4B07, A4B09
2/Soil PEs/A4B55, A4B58
CERCLIS No. VTD048141741
TDD No. 12-10-0008, Task No. 0850-49

Dear Ms. Bosworth:

A Tier II validation was performed on the organic analytical data for 18 soil samples and four aqueous equipment (rinsate) blanks collected by WESTON START at the Jard Company Inc site in Bennington, Vermont, and for two PE samples obtained from EPA Region I. *Italicized sample ID numbers in the list above are associated with samples in this SDG, but reported in another SDG.* The samples were analyzed under CLP following SOW SOM01.2 as low/medium level for Aroclor compounds. The data were evaluated as Tier II level in accordance with the "Region I EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses" dated December 1996, and the USEPA CLP National Functional Guidelines for Superfund Organic Methods, and were based on the following parameters:

	• Overall Evaluation of Data and Potential Usability Issues.
*	• Data Completeness.
*	• Preservation and Technical Holding Times.
*	• GC/MS and GC/ECD Instrument Performance Checks.
	• IC and CC.
*	• Blanks.
	• Surrogate Compounds.
NA	• IS.
	• MS/MSD.
	• Field Duplicates.
NA	• Sensitivity Check (MDL Study or LFB).

	•	PE Samples/Accuracy Check.
	•	Target Compound Identification.
*	•	Sample Quantitation and Reported Quantitation Limits.
NA	•	TICs.
*	•	SVOC and PEST/PCB Cleanup.
*	•	System Performance.
NA	•	SEDD/ADR.

* = No qualifications will be applied based on this parameter.

Table I summarizes overall evaluation of the data with reference to the DQO and potential usability issues. Qualified data are summarized in Data Summary Table 1.

Overall Evaluation of Data and Potential Usability Issues

See Table I for overall evaluation of data and potential usability issues.

Preservation and Technical Holding Times

Aroclor samples A4B36-A4B38, A4B40-A4B42, and A4B45-A4B53 were extracted between 4 and 7 days beyond the holding time specified in SOM01.2. Based upon the holding times articulated in SW-846, the Chlorinated Biphenyl Congener Statement of Work CBC01.2, and in consultation with USEPA Region I Quality Assurance (QA) chemists, the holding time for Aroclors has been established as up to 1 year. The positive and non-detected Aroclor results will not be qualified.

Initial and Continuing Calibration

Compounds that did not meet RSD criteria in the IC, %D criteria in the CC, and/or RRF criteria in the IC or CC are summarized in the following tables:

AROCLORS:

Compound	CV 4/26/13
Aroclor-1254 (peak 5)	× (1)
Aroclor-1254 (peak 3)	× (2)
Samples Affected:	A4B44MS, A4B44MSD

Actions:
× = %RSD >20 or %D >15. Estimate (J) all positive results.
(1) = Criteria failed on Column No. 1.
(2) = Criteria failed on Column No. 2.

Sample results will be qualified as indicated above.

Surrogate Compounds

AROCLORS:

Samples in which two or more Aroclor surrogate recoveries did not meet criteria are summarized in the following table:

Sample No.	No. of Surrogates Out	Action Pos/ND
A4B52	1	None
A4B52DL	4	None
A4B53	4	J/A
A4B53DL	4	None

Sample results will be qualified as indicated above.

MS/MSD

The following spike compounds did not meet %R and/or RPD criteria for MS/MSD soil samples A4B44MS and A4B44MSD:

Fraction	Compound	MS %R	MSD %R	RPD	Method QC Limits		Action Pos/ND
					%R	RPD	
Aroclor	1016	556	581	--	29-135	--	J Pos

-- = met criteria

Results for the non-compliant compound in the unspiked sample A4B44 will be qualified as indicated above. Aroclor 1242 was present in the unspiked sample, therefore introducing a high bias to Aroclor 1016 recovery.

Field Duplicates

The following compounds failed to meet the RPD criteria (<50%) for field duplicate precision in soil field duplicate samples A4B36 and A4B37:

Compound	A4B36 Concentration (µg/kg)	A4B37 Concentration (µg/kg)	RPD	Action Pos/ND
Aroclor-1242	350	170	69%	J Pos

Non-compliant compounds in field duplicate samples A4B36 and A4B37 will be qualified as indicated above.

PE Samples/Accuracy Check

The criteria used by START for qualification of sample data based on the PE sample results are as follows:

PE Score	Action	
	Non-Detects	**Positive Results**
In Window	Accept	Accept
Warning Low/High	Accept	Accept
Action Low	Reject (R)	Estimate (J)
Action High	Accept	Estimate (J)
TCL Misses	Reject (R)	Varies
TCL Contaminants	Accept	Varies
TIC Misses	Varies	Varies
TIC Contaminants	Varies	Varies

All non-compliant PE scores were investigated by checking raw data, calculations, calibrations, possible matrix interferences, and blank contamination. Unless otherwise noted, all results reported by the laboratory were found to be correct, based on the data generated by the laboratory.

The laboratory properly identified and quantified the soil Aroclor-1242 PE sample (A4B55, PE No. ASX0183). No qualifications were applied.

The laboratory properly identified the soil Aroclor-1254 PE sample (A4B58, PE No. AS1487). The PE was scored Action High; therefore, all Aroclor 1254 results will be qualified as indicated in the table above.

Target Compound Identification

The dual column correlation did not meet %D confirmation criteria for the following Aroclor compounds:

Sample	Compound	% D	Action
A4B41	Aroclor-1242	29.2	J
A4B41DL	Aroclor-1242	45.4	J
A4B42	Aroclor-1242	27.3	J
A4B42DL	Aroclor-1242	30.0	J
A4B47	Aroclor-1242	26.6	J
A4B47DL	Aroclor-1242	40.0	J

Actions:

J = Estimate results when %D >25 but <100 for pesticides or %D >25 but <500 for PCBs.
R = Reject results when %D >100 for pesticides or %D >500 for PCBs.
U = Qualify result as undetected at the CRQL when %D >100 for pesticides or %D >500 for PCBs, and both results are less than the CRQL.

Sample results have been qualified as indicated above.

Please contact the undersigned at (978) 552-2100 if you have any questions or need further information.

Very truly yours,

WESTON SOLUTIONS, INC.
Region I START

William W. Mahany
Principal Project Scientist

John Burton
Lead Chemist

email cc: Jennifer Feranda (CLP PO - Region II) - DV Letter w/Data Tables, and ORDA Form only – Feranda.jennifer@epa.gov

Attachments:
Table I: Overall Evaluation of Soil Data
Data Summary Key
Acronym List
Data Summary Table 1
DV Worksheets
PE Sample Score Reports (included in DV worksheets)
Field Sampling Notes (including a copy of sampler's COC Records)
CSF Audit (DC-2 Form) - Evidence Audit Photocopy (Including CSF Receipt/Transfer Form)
DQO Summary Form

S:\12100008\Analytical\Case_43392\A4B36\A4B36_val_.doc

TABLE I

JARD COMPANY INC
Case No. 43392; SDG No. A4B36

Overall Evaluation of Soil Data

AROCLORs					
DQO (list all DQOs)	Sampling and/or Analytical Method Appropriate Yes or No	Measurement Error		Sampling Variability**	Potential Usability Issues
		Analytical Error	Sampling Error*		
1. To obtain sufficient data from surface and subsurface soil samples collected at the Jard Company site for PCB (Aroclor) analysis, to document potential source areas located on and off the property, and to document contamination in the soil and sediment associated with source areas located on the property.	*Analytical Method:* Yes, SOM01.2 *Sampling Method:* Yes, Hand Augers, and Stainless Steel Scoops.	Refer to qualifications in attached Data Summary Table 1. 1-4	Refer to qualifications in attached Data Summary Table 1.		1. The MS/MSD recoveries were biased high for Aroclor-1016 due to the presence of Aroclor-1242 in sample A4B44. 2. Positive results for Aroclor-1242 in field duplicate samples A4B36 and A4B37 were estimated (J) due to poor precision RPD values. 3. PE sample A4B58/AS1487 was scored Action High for Aroclor-1254. All positive Aroclor-1254 results were estimated (J). 4. The positive Aroclor-1242 results in samples A4B41, A4B41DL, A4B42, A4B42DL, A4B47, and A4B47DL were estimated (J) due to poor dual-column correlation.

* The evaluation of "sampling error" cannot be completely assessed in data validation.
** Sampling variability is not assessed in data validation.

DATA SUMMARY KEY
ORGANIC DATA VALIDATION

J	=	The associated numerical value is an estimated quantity.
R	=	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. The R replaces the numerical value or SQL.
U	=	The compound was analyzed for, but not detected. The associated numerical value is the SQL or the adjusted SQL.
UJ	=	The compound was analyzed for, but not detected. The associated numerical value is the estimated SQL.
EB	=	The compound was identified in an aqueous EB that was used to assess field contamination associated with soil/sediment samples.
TB	=	The compound was identified in an aqueous TB that was used to assess field contamination associated with soil/sediment samples.
BB	=	The compound was identified in an aqueous BB that was used to assess field contamination associated with soil/sediment samples.

ACRONYM LIST
ORGANIC DATA VALIDATION

AQ	aqueous
AQ FB	aqueous field blank
BB	Bottle Blank
B/N	base/neutral compound
°C	degrees Celsius
CC	Continuing Calibration
CCV	Continuing Calibration Verification
CLP	Contract Laboratory Program
COC	Chain-of-Custody record
COR	Contracting Officer Representative
CRQL	Contract Required Quantitation Limit
CSF	Complete SDG File
%D	percent difference
DAS	Delivery of Analytical Services
DMC	Deuterated Monitoring Compound
DQO	Data Quality Objective
DV	Data Validation
DW	drinking water
EB	Equipment Blank
EPA	Environmental Protection Agency
GC/ECD	Gas Chromatograph/Electron Capture Detector
GC/MS	Gas Chromatograph/Mass Spectrometry
GW	groundwater
IC	Initial Calibration
IS	Internal Standard
kg	kilogram
L	liter
LCS	Laboratory Control Sample
LFB	Laboratory Fortified Blank
MDL	Method Detection Limit
µg	microgram
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NA	Not Applicable
ND	non-detected result
ng	nanogram
NERL	New England Regional Laboratory
OSC	On-Scene Coordinator
ORDA	Organic Regional Data Assessment
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl compound
PEST/PCB	pesticide/polychlorinated biphenyl compound
PE	Performance Evaluation
Pos	positive result
QC	Quality Control
%R	percent recovery
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SOW	Statement of Work
SQL	Sample Quantitation Limit
S/S	soil/sediment
S/S (m)	soil/sediment medium level
START	Superfund Technical Assessment and Response Team
SVOC	semivolatile organic compound
SW	surface water
TB	Trip Blank
TCL	Target Compound List
TDD	Technical Direction Document
TIC	Tentatively Identified Compound
TR	Traffic Report
VOC	volatile organic compound
WESTON	Weston Solutions, Inc.

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

	SAMPLE NUMBER		A4B36	A4B37	A4B38	A4B39	A4B40	A4B41	A4B42
	SAMPLE LOCATION		SO-45	SO-201	SO-57	SO-92	SO-61	SO-52	SO-53
	STATION LOCATION		JCS-060	JCS-476	JCS-072	JCS-126	JCS-182	JCS-069	JCS-084
	LABORATORY NUMBER		E1903-04	E1903-05	E1903-06	E1903-15	E1903-16	E1903-17	E1903-18
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1221	7.8	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1232	1.3	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1242	6.2	33	350 J	170 J	250	1100 *	1200 *	630 *J	700 *J
Aroclor-1248	2.7	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1254	3.2	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1260	3.2	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1262	14	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
Aroclor-1268	6.6	33	38 U	40 U	45 U	42 U	41 U	49 U	37 U
DILUTION FACTOR			1.0	1.0	1.0	1.0 / 10.0*	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*
DATE SAMPLED			4/4/2013	4/4/2013	4/4/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013
DATE EXTRACTED			4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
DATE ANALYZED			4/26/2013	4/25/2013	4/25/2013	5/2/2013	4/26/2013	4/26/2013	4/26/2013
SAMPLE WEIGHT (GRAMS)			30.1	30.1	30.1	30	30	30.1	30
% SOLID			86.6	82.9	73.3	78.0	81.1	67.8	88.4

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

	SAMPLE NUMBER		A4B43	A4B44	A4B45	A4B46	A4B47	A4B48	A4B49
	SAMPLE LOCATION		SO-91	SO-85	SO-24	SO-25	SO-28	SO-29	SO-31
	STATION LOCATION		JCS-125	JCS-116	JCS-078	JCS-029	JCS-039	JCS-040	JCS-043
	LABORATORY NUMBER		E1903-07	E1903-01	E1903-19	E1903-20	E1903-21	E1903-22	E1903-10
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1221	7.8	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1232	1.3	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1242	6.2	33	110	1200 *	1100 *	2000 *	1000 *J	1800 *	1100 *
Aroclor-1248	2.7	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1254	3.2	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1260	3.2	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1262	14	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
Aroclor-1268	6.6	33	38 U	40 U	36 U	39 U	36 U	36 U	37 U
DILUTION FACTOR			1.0	1.0 / 5.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 10.0*	1.0 / 5.0*
DATE SAMPLED			4/8/2013	4/8/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013	4/4/2013
DATE EXTRACTED			4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013	4/22/2013
DATE ANALYZED			4/25/2013	4/26/2013	4/26/2013	4/26/2013	4/26/2013	4/27/2013	4/26/2013
SAMPLE WEIGHT (GRAMS)			30	30	30	30.0	30	30	30
% SOLID			85.9	83.3	90.8	83.5	92.7	91.7	89.6

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

SITE: JARD COMPANY INC
CASE: 43392 SDG: A4B36
LABORATORY: CHEMTECH CONSULTING GROUP

DATA SUMMARY TABLE 1
AROCLOR IN SOIL ANALYSIS
µg/Kg

	SAMPLE NUMBER		A4B50	A4B51	A4B52	A4B53			
	SAMPLE LOCATION		SO-31	SO-30	SB-01	SB-03			
	STATION LOCATION		JCS-044	JCS-042	JCS-131	JCS-135			
	LABORATORY NUMBER		E1903-11	E1903-12	E1903-13	E1903-14			
COMPOUND	MDL	CRQL							
Aroclor-1016	2.6	33	39 U	38 U	43 U	360 U			
Aroclor-1221	7.8	33	39 U	38 U	43 U	360 U			
Aroclor-1232	1.3	33	39 U	38 U	43 U	360 U			
Aroclor-1242	6.2	33	3500 *	7300 *	160000 *	180000 *			
Aroclor-1248	2.7	33	39 U	38 U	43 U	360 U			
Aroclor-1254	3.2	33	39 U	38 U	43 U	360 U			
Aroclor-1260	3.2	33	39 U	38 U	43 U	360 U			
Aroclor-1262	14	33	39 U	38 U	43 U	360 U			
Aroclor-1268	6.6	33	39 U	38 U	43 U	360 U			
DILUTION FACTOR			1.0 / 10.0*	1.0 / 100.0*	1.0 / 500.0*	1.0 / 500.0*			
DATE SAMPLED			4/4/2013	4/4/2013	4/1/2013	4/1/2013			
DATE EXTRACTED			4/22/2013	4/22/2013	4/22/2013	4/22/2013			
DATE ANALYZED			4/26/2013	4/26/2013	4/26/2013	4/26/2013			
SAMPLE WEIGHT (GRAMS)			30	30.1	30.1	30			
% SOLID			84.4	87.0	77.2	90.5			

NOTES: µg/Kg = micrograms per Kilogram
All results are reported on a Dry Weight Basis.
CRQL = Contract Required Quantitation Limit
MDL = Method Detection Limit
U = Value is Non-Detected.
UJ = Value is Non-Detected, and Detection Limit is Estimated.
J = Value is Estimated.
R = Value is Rejected.
* = Reported value is from diluted analysis.

REGION I, EPA-NE ORGANIC REGIONAL DATA ASSESSMENT (ORDA)*

Case No.: 43392 Site Name: JARN Company

SDG No.: A4B36 No. of Samples/Matrix: 20/Soil

Lab Name: Chemtech Consulting Validation Contract: WESTON

SOW#/Contract#: SOM01.2 Validator's Name: J. Burton

EPA-NE DV Tier Level: Tier II Date DP Rec'd by EPA-NE: 5/10/13

TPO/PO: **ACTION ____ FYI ✓ DV Completion Date: 5/31/13

ANALYTICAL DATA QUALITY SUMMARY

	VOC	SVOC	PEST	ARO
1. Preservation and Contractual Holding Times:	NA	NA	NA	o
2. GC/MS / GC/ECD Instrument Performance Check:				
3. Initial Calibration:				
4. Continuing Calibration:				
5. Blanks:				
6. DMCs or Surrogate Compounds:				
7. Internal Standards:			NA	NA
8. Matrix Spike/Matrix Spike Duplicate:				o
9. Sensitivity Check:				
10. PE samples - Accuracy Check:				o
11. Target Compound Identification:	NA	NA		o
12. Compound Quantitation and Reported QLs:				
13. Tentatively Identified Compounds:			NA	NA
14. Semivolatile Cleanup/Pesticide/PCB Cleanup:	NA			o
15. Data Completeness:				
16. Overall Evaluation of Data:				

o = Data had no problems or were qualified due to minor contractual problems.
m = Data were qualified due to major contractual problems.
z = Data were rejected as unusable due to major contractual problems.

Action Items (z items):

Areas of Concern (m items):

Comments:

*This form assesses the analytical data quality in items of contractual compliance only. It does not assess sampling errors and/or non-contractual analytical issues that affect data quality.

** Check "ACTION" only if contractual defects resulted in reduced payment/data rejection recommendations.

Validator: J. Burton Date: 5/31/13

EPA - NE
Data Validation Worksheet Cover Page - Page 1

Site Name: JARD Company
TDD No.: 12-10-0008
Task No.: 0850-49

REGION I ORGANIC DATA VALIDATION

The following data package has been validated:

Lab Name: Chemtech Consulting
Case No.: 43392
SDG No.: A4B36
No. of Samples/Matrix: 20/soil

SOW #/Contract #: SOM01.2
Sampling Dates: 4/1, 4/4, 4/8, 4/17/2013
Shipping Dates: 4/17-4/18/2013
Date Rec'd by Lab: 4/18-4/19/2013

Traffic Report Sample Nos: A4B36 - A4B53

Trip Blank No.:
Equipment Blank No: A4B02, A4B09, A4B0C, A4B07
Field Duplicate Nos: A4B36, A4B37
PE Nos: A4B55, A4B58

The Region I, EPA - NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, revision 12/96 was used to evaluate the data and/or approved modifications to the EPA - NE Functional Guidelines were used to evaluate the data and are attached to this cover page: (attached modified criteria from EPA approved QAPjP or amendment to the QAPjP).

A Tier II or a Tier III evaluation was used to validate the data. If a Tier II validation with a partial Tier III was used, then identify samples, parameters, etc. that received partial Tier III validation:

The data were evaluated based upon the following parameters:

- Overall Evaluation of Data
- Data Completeness (CSF Audit - Tier I)
- Preservation and Technical Holding Times
- GC/MS and GC/ECD Instrument Performance Check
- Initial and Continuing Calibrations
- Blanks
- Surrogate Compounds
- Internal Standards
- Matrix Spike/Matrix Spike Duplicate
- Field Duplicates
- Sensitivity Check
- PE Samples/Accuracy Check
- Target Compound Identification
- Compound Quantitation and Reported Quantitation Limits
-TICs
-Semivolatile and Pesticide/PCB Cleanup
- System Performance

Region I Definitions and Qualfiers:

A - Acceptable Data
J - Numerical value associated with compound is an estimated quantity.
R - The data are rejected as unusable. The R replaces the numerical value or sample quantitation limit.
U - Compound not detected at that numerical sample quantitation limit.
UJ - The sample quantitation limit is an estimated quantity.
TB, EB - Compound detected in aqueous trip blank or aqueous equipment blank associated with soil/sediment samples.

Validator's Name: J C Newton Company Name: WESTON Phone Number: 978-552-2100

Date Validation Started: 5/28/13 Date Validation Completed: 5/31/13

EPA - NE
Data Validation Worksheet Cover Page - Page 2

Check if all criteria are met and no hard copy worksheet provided. Indicate NA if worksheet is not applicable to analytical method. Note: There is no standard worksheet for System Performance, however, the validator must document all system performance issues in the Data Validation Memorandum.

VOA/SV Worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	NA - audit only
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	@
VOA/SV-II	GC/MS INSTRUMENT PERFORMANCE CHECK (TUNING)	
VOA/SV-III	INITIAL CALIBRATION	
VOA/SV-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
VOA-VI	VOA SURROGATE SPIKE RECOVERIES	
SV-VI	SV SURROGATE SPIKE RECOVERIES	
VOA/SV-VII	INTERNAL STANDARD PERFORMANCE	
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	NA
VOA/SV-Pest/PCB-XI	ACCURACY CHECK/ PE SCORE SHEETS	@
VOA/SV-Pest/PCB-XII	TARGET COMPOUND IDENTIFICATION	NA
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
VOA/SV-XIV	TENTATIVELY IDENTIFIED COMPOUNDS	
VOA/SV-XV	SEMIVOLATILE CLEANUP	
TABLE II - WORKSHEET	OVERALL EVALUATION OF DATA	*

Pest/ARO Worksheets:

VOA/SV-Pest/PCB	COMPLETE SDG FILE (CSF) AUDIT	✓
VOA/SV-Pest/PCB-I	PRESERVATION AND HOLDING TIMES	@
Pest/PCB-IIA	GC/ECD INSTRUMENT PERFORMANCE CHECK-RESOLUTION	NA
Pest/PCB-IIB	GC/ECD INSTRUMENT PERFORMANCE CHECK-RETENTION TIMES	✓
Pest/PCB-IIC	GC/ECD INSTRUMENT PERFORMANCE CHECK-ACCURACY CHECK OF INITIAL CALIBRATION	
Pest/PCB-IID	GC/ECD INSTRUMENT PERFORMANCE CHECK-PESTICIDE DEGRADATION	NA
Pest/PCB-III	INITIAL CALIBRATION	✓
Pest/PCB-IV	CONTINUING CALIBRATION	
VOA/SV-Pest/PCB-V-A	BLANK ANALYSIS	
VOA/SV-Pest/PCB-V-B	BLANK ANALYSIS	
Pest/PCB-VI	SURROGATE COMPOUNDS: SPIKE RECOVERIES AND RETENTION TIME SHIFT	
Pest/PCB-VII	PESTICIDE CLEANUP	NA
VOA/SV-Pest/PCB-VIII	MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
VOA/SV-Pest/PCB-IX	FIELD DUPLICATE PRECISION	
VOA/SV-Pest/PCB-X	SENSITIVITY CHECK	NA
VOA/SV-Pest/PCB-XI	ACCURACY CHECK/ PE SCORE SHEETS	@
Pest/PCB-XII	COMPOUND IDENTIFICATION	
VOA/SV-Pest/PCB-XIII	SAMPLE QUANTITATION	
TABLE II - WORKSHEET	OVERALL EVALUATION OF DATA	*

@ - always included
* - See DV Memo

I certify that all criteria were met for the worksheets checked above.

Signature: J Burton Name: John Burton

Date: 5/31/13

COMPLETE SDG FILE (CSF) AUDIT

Organic Fractions: Case 43392 SDG A4B36

Missing Information	Date Lab Contacted	Date Received
~~None~~ Form 7N (AR1242306)	4/25/13	5/31/13

Validator: JC Burton Date: 5/31/13

HRS Reference #82

Sampler: G. Hornok Company: WESTON Contacted: Yes (No) Date: _____

1. PRESERVATION AND HOLDING TIMES

Cooler 5°, 6°, 6° Documented:
Temp: 6°, 6°, 6° Page: 542 - 547

Circle sample numbers with exceeded technical holding times or omitted preservation.
List all required preservation codes and circle omitted preservation codes.
Circle all exceeded technical holding times.
Identify extraction technique after "# of Days"/(*Extraction Code).

				PEST						ARO					
Sample No. (TR No.)	Matrix	Pres. Code	Date Sampled	Date Extracted	# of Days from Samp. to Ext.	*Ext. Code	Date Analyzed	# of Days from Ext. to Anal.	Action	Date Extracted	# of Days from Samp. to Ext.	*Ext. Code	Date Analyzed	# of Days from Ext. to Anal.	Action
A4B36	S/S	1, 3	4/4/13							4/22/13	18	SOX	4/24/13	4	none + professional judgement + EPA Region I Util22 SW-846 criteria of no specific HT for Aroclors/PCB
A4B37													4/25/13	3	
A4B38														3	
A4B39			4/8/13								14		5/2/13	10	
A4B40			4/4/13								18		4/24/13	4	
A4B41															
A4B42															
A4B43			4/8/13								14		4/25/13	3	
A4B44											14		4/26/13	4	
A4B45			4/4/13			NA					18				
A4B46															
A4B47															
A4B48													4/27/13	5	
A4B49													4/26/13	4	
A4B50															
A4B51															
A4B52			4/1/13								21				
A4B53											21				
A4B55			4/17/13								5				
A4B58											5				

Preservation Code:
1. Cool @ 4°C (± 2°C)
2. Preserve with HCl to ≤ pH 2.
3. Protect from light.
4. Freeze.
5. Room temperature (avoid excessive heat).
6. Encore sampler (48 hour hold time).

***Extraction Code:**
L/L - Liquid/Liquid
SON - Sonication
SEP - Separatory funnel
SOX - Soxhlet
SPE - Solid Phase Extraction

Action Code:
J - Estimate (J) detected values.
UJ - Estimate (UJ) non-detected values.
R - Reject (R) non-detected values.

Matrix Codes:
AQ - Aqueous
S/S - Soil/Sediment
AQ FB - Aqueous Field Blank

Validator: J Burton Date: 5/28/13

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/ARO - V

V. Rinsate Blank Tabulation - list the applicable rinsate (equipment) blanks below:

Rinsate Blank No.	Sample No.	Equipment Rinsed to Generate the RB	Matrix Applies to:
RB- 01	A4B02	Geoprobe	SD
RB- 06	A4B09	Hand auger	SS/SO
RB- 04	A4B07	Hand auger	SS/SO
RB- 03	A4B06	Hand auger	↓
RB-			
RB-			

Matrix Codes: SS - surface soil
SD - sediment
SO - source soil
SB - soil boring
GW - groundwater
DW - drinking water
SW - surface water

Note: Apply each RB only to the matrix to which it corresponds. For example, apply the hand auger RB to the soil samples, but not to the surface water samples.

If more than one hand auger/soil sample RB was collected, the RBs may be batched and the highest hit from the batch used to determine the action levels. However, if one RB exhibits an unusual amount of contamination, apply this RB to only the associated samples. Do not batch this RB and apply to all samples of the same matrix.

Validator: _____ Date: 5/28/13

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/ARO - V- A

Concentration Level: Low or Medium

V. BLANK ANALYSIS - list the blank contamination found in the laboratory blanks.

Sampler: Hornok Company: WESTON Contacted: Yes (No) Date: _____

1. Laboratory: Method, Storage, and Instrument Blanks

Date Extracted	Date Analyzed	VOC, SVOC, or P/PCB	Matrix	Sample No.	Blank Type	Instrument or Column	Compound	Conc. (units)
4/22/13	4/25/13	PCB	Soil	ABLK54	Method	ECD-B	ND	
	4/22/13	PCB	NA	AIBLK1	Inst	ECD-B	ND	
	4/25/13	PCB	NA	AIBLK6	Inst	ECD-B	ND	
	4/25/13	PCB	NA	AIBLK7	Inst	ECD-B	ND	
	4/26/13	PCB	NA	AIBLK8	Inst	ECD-B	ND	
	4/26/13	PCB	NA	AIBLK9	Inst	ECD-B	ND	
	4/26/13	↓	↓	AIBLK10	Inst	↓	ND	
	4/26/13			AIBLK11	↓		ND	
	4/27/13			AIBLK12			ND	
	5/1/13			AIBLK13			ND	
	5/1/13			AIBLK14			ND	
	5/2/13			AIBLK15			ND	
	5/2/13	↓	↓	AIBLK16	↓	↓	ND	

Validator: _____ Date: 5/28/13

PEST/ARO Method Blanks: If %D is >100% (PEST) or >500% (ARO) , then not a positive hit and therefore not a contaminant.
PEST Instrument Blanks: If not present on both columns, then not a positive and therefore not a contaminant.
Do not use blanks used to clean the instrument after a contaminated sample to set Action Levels.

EPA-NE - Data Validation Worksheet
VOA/SV - Pest/ARO - V- A

Concentration Level: Low or Medium

V. BLANK ANALYSIS - list the blank contamination found in the field blanks.

Sampler: Hornok Company: WESTON Contacted: Yes No Date:

2. Field: Equipment (Rinsate) and Trip Blanks.

Date Extracted	Date Analyzed	VOC, SVOC, or P/PCB	Matrix	Sample No.	Blank Type	Instrument or Column	Compound	Conc. (units)	Qualifier due to Lab blanks
4/5/13	4/5/13	PCB	AQ	A4B02	Equipment	ECD-O	NA		none
4/11/13	4/12/13	↓	↓	A4B09	↓	ECD-O	↓		↓
4/8/13	4/8/13			A4B06		ECD-O			
4/8/13	4/8/13			A4B07		ECD-O			

Validator: Date: 5/29/13

PEST/ARO Field Blanks: If %D is >100% (PEST) or >500% (ARO) then not a positive hit and therefore not a contaminant.
Use the last column to evaluate laboratory blank contamination on EB and TB contamination. If result qualified as undetected (U) due to laboratory contamination, then this result can not be used to apply an EB or TB qualifier.

All criteria met

V. BLANK ANALYSIS

3. Blank Actions: **Actions Apply to Soil/Sediment (S/S) or Solid Samples**

Compound	Blank with Max. Conc.	Date Blank Sampled/ Analyzed	Max. Conc.	Action Level (ug/kg)	Sample QL (ug/kg)	Samples Affected	Action
	Lab, NaHSO4, or MeOH*					S/S Samples	U
Method Blank ND	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
	Lab, NaHSO4, or MeOH*					"	U
				(ug/L)			
	EB or TB*			None		S/S Samples	EB or TB*
EB - ND	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*
	EB or TB*			None		"	EB or TB*

* - Circle one

* - Circle one

Applicable Lab Blanks Include:
MB - Method Blanks
HB - Holding Blanks
IB - Instrument Blanks
SB - Storage Blanks
CUB- Cleanup Blank

FB Include:
Equip - Equipment Blank (rinsate)
Trip - Trip Blank
NaHSO4 - Sodium Bisulfate
MeOH - Methanol

Comments:

Validator: [signature]

Date: 5/29/13

EPA-NE - Data Validation Worksheet
VOA/SV-Pest/PCB -VIII

HRS Reference #82

VIII. MATRIX SPIKE/MATRIX SPIKE DUPLICATE - List all MS/MSD analytes that are outside method QC acceptance criteria.

Use a separate worksheet for each MS/MSD pair.

Sample No: A4B44 **Matrix:** Soil **Concentration Level:** L/M **Dilution Factor:** _____

Parameter	Compound	MS %R	MSD %R	RPD	Method QC Limits %R	Method QC Limits RPD	Concentration Unspiked	Concentration MS	Concentration MSD	%RSD	Action
Aroclor	1016	556	581								J/A
	1260										A/A
1242 interferes 1016	1242						~~1300~~ 1100	1200	1300	8.3	A/A

Actions apply only to the unspiked sample.

Qualification of Data:

MS/MSD compound present in unspiked sample at >4x spike concentration; accept data unqualified.
If MS/MSD data can not be reported due to sample dilution; then validator should note this in validation memo. Qualification of the data is not required.

Spiked Compounds

Sample Results	%R < 10%	10% ≤ %R < Lower QC Limit	Lower QC Limit ≤ %R ≤ Upper QC Limit	%R > Upper QC Limit	RPD > QC Limit
Detects	J	J	A	J	J
Non-detects	R	UJ	A	A	UJ

Unspiked Compounds

Sample Results	%RSD ≤ 50%	%RSD > 50%
Detects	A	J
Non-detects	A	UJ

Validator: _____ Date: 5/29/13

RSD 1100, 1200, 1300 $\overline{1200}$

$$\sqrt{\frac{(1100-1200)^2+(1200-1200)^2+(1300-1200)^2}{2}}$$

$$\frac{10000+10000}{}$$

$100/1200 = 8.3\%$

EPA - NE -Data Validation Worksheet
VOA/SV - Pest/PCB - IX

IX. FIELD DUPLICATE PRECISION - List all field duplicate analytes that are outside criteria.

Use a separate worksheet for each field duplicate pair.

Sample No: A4B36 **Duplicate Sample No:** A4B7 **Matrix:** Soil

Parameter	Compound	Sample Conc.	Sample QL SQL	Sample QL 2x SQL	Duplicate Conc.	Duplicate QL SQL	Duplicate QL 2x SQL	RPD	QC Acceptance Criteria RPD or NA*	Action
Aroclors	B42	350	38	76	170	40	80	69%	RPD	Jpos.

* - For instances where one duplicate result is ND (or reported less than the SQL). QC Acceptance Criteria: ≤30% for AQ samples; ≤50% for S/S samples.

Does the MS/MSD data indicate acceptable laboratory precision? (Yes) No

Comments: _____

Sampler: _____ Company: WESTON Date Contacted: _____

Reason for contact and resolution obtained: _____

Qualification of Data:

1. Actions apply to the field duplicate samples only.
2. Estimate (J) positive results when both the sample and field duplicate results are >2x the SQL and the RPD is exceeded.
3. Estimate (J) positive results when one result is >2x the SQL and the other result is < the SQL.
4. Estimate (J, UJ) the positive and non-detected results when one result is > 2x the SQL and the other result is non-detect.

Validator: _____ Date: 5/29/13

EPA - NE - Data Validation Worksheet
VOA/SV - Pest/PCB -XI

XI. ACCURACY CHECK (Performance Evaluation Results) - List all analytes that are outside criteria.

SDG No.: A4B36 **Case:** 43392

Are more than one-half the PE analytes within criteria for each parameter? (Yes) No

Always submit this sheet and attach PE score sheets

PE Sample No.	Ampule No.	Parameter	Type of PE	Matrix	Analyte	Conc.	Region I EPA PE Scores*	Samples Affected	Action
A4B55	PES-AS1483	PCB	single blind	soil	1242	pass			
A4B58	PES-AS1487	PCB	↓	soil	1254	Fail Action High			

*For Region I PE indicate the Region I PE Score report result: Action High, Acion Low, TCL Miss, or TCL Contaminant.

Validator: [signature] Date: 5/29/13

PES SCORING EVALUATION REPORT

Lab Name: Chemtech Consulting Group
Contract: EPW11030
SDG No.: A4B36
Lab File ID: PB004937.D
Date Analyzed: 04/25/2013
Decanted: No
Injection Vol. (uL): 1.0
Sulfur Cleanup: No

Case No.: 43392
Matrix: Soil
Date Received: 04/18/2013
Sample Wt./Vol. (g/mL): 30.0 g
Extraction Type: SOXH
GPC Cleanup: No
Dilution Factor: 1.0

Lab Code: CHEM
SAS/Client No.: NA
Lab Sample ID: E1903-08
Date Extracted: 04/22/2013
% Moisture: 0.0
Conc. Extract Vol. (uL): 10000
pH: NA
Units: ug/Kg

Analysis Method: SOM01.2
Scoring Method: SOM01.2
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
53469-21-9	Aroclor-1242	870	D	PASS	Within Limits
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

PES SCORING EVALUATION REPORT

Lab Name: Chemtech Consulting Group
Contract: EPW11030
SDG No.: A4B36
Lab File ID: PB004967..D
Date Analyzed: 04/26/2013
Decanted: No
Injection Vol. (uL): 1.0
Sulfur Cleanup: No

Case No.: 43392
Matrix: Soil
Date Received: 04/18/2013
Sample Wt./Vol. (g/mL): 30.0 g
Extraction Type: SOXH
GPC Cleanup: No
Dilution Factor: 1.0

Lab Code: CHEM
SAS/Client No.: NA
Lab Sample ID: E1903-09
Date Extracted: 04/22/2013
% Moisture: 0.0
Conc. Extract Vol. (uL): 10000
pH: NA
Units: ug/Kg

Analysis Method: SOM01.2
Scoring Method: SOM01.2
Comments:

CAS No.	Analyte	Laboratory Results		PES Evaluation	
		Concentration	Q		
11097-69-1	Aroclor-1254	1600	D	FAIL	Action High
****	END Main Analytes	**********	****	****	**********
****	END All Analytes	**********	****	****	**********

EPA - NE - Data Validation Worksheet
VOA/SV - Pest/PCB - XIII

XIII. SAMPLE QUANTITATION

If no PE, do sample calculation.

Recalculate, from the raw data, the concentration for one positive detect and one reported sample quantitation limit (SQL) for a non-detect in a diluted sample or soil sample per fraction. (Note: Although Section XIII, C 2. a. requires that one calculation for each fraction in each sample be performed, the validator is only required to reproduce an example, for each fraction, of one positive detect and one SQL calculation on this worksheet.)

Fraction		Calculation*	
VOC		Detect:	Non-detect QL:
Sample No.:			
Reported Compound:			
Reported Value:			
Non-detected Compound:			
Reported Quantitation Limit:			
SVOC		Detect:	Non-detect QL:
Sample No.:			
Reported Compound:			
Reported Value:			
Non-detected Compound:			
Reported Quantitation Limit:			
P/PCB		Detect: $\frac{(A_x)(V_t)(DF)(GPC)}{(CF)(V_i)(W_s)(D)}$ (10000) 215617 pk1, 884619 pk2, 334772 pk3, 783844 CF1, 1747933 CF2, 644519 CF3 — over	Non-detect QL: $SQL = CRQL\frac{(W_x)(V_t)(DF)}{(W_s)(V_c)(D)}$ $SQL = 33 \times \frac{(30)(10000)(1)}{(30.1)(10000)(.89)}$ $SQL = 39.67 = 40$ ✓
Sample No.:	A4B37		
Reported Compound:	Aroclor1242		
Reported Value:	170 ✓		
Non-detected Compound:	Aroclor1260		
Reported Quantitation Limit:	40 U		

* - NA for Tier II if PE score is OK.

Do all soil/sediment samples have % solids greater than 30%? (Y) N If solids <30%, have sample volumes been increased sufficiently to compensate? Y N

If no. list sample numbers_____

Validator: J Benton Date: 5/29/13

$$\frac{(215617)(10000)(1)(1)}{(783844)(1)(30.1)(.829)} = 110.24$$

$$\frac{(884619)(10000)(1)(1)}{(174723)(1)(30.1)(.829)} = 202.88$$

$$\frac{(334772)(10000)(1)(1)}{(644519)(1)(30.1)(.829} = 208.16$$

$$= 173.7$$

$$= 170$$

EPA - NE - Data Validation Worksheets
Form 2E and 2F

All Criteria Met _____

VI. SURROGATE SPIKE RECOVERIES - PESTICIDES/PCBS

List the percent recoveries which do not meet the method QC acceptance criteria.

Sample No.	TCX		DCB		Action	
	Column 1	Column 2	Column 1	Column 2	Detects	Non-detects
A4B52	415	101	72	80	A	A
A4B53	4819	822	704	777	~~A~~ J	A
A4B52DL	0	0	0	0	~~A~~ J A	A
A4B53DL	0	0	0	0	A	A

all other Aroclors -1242

TCX - Tetrachloro-m-xylene DCB - Decachlorobiphenyl

QC Limits:	30-150	30-150

Qualification of data:

1. No action is taken when a sample is analyzed at a dilution.
2. No action is required when only one of the four surrogates is outside the QC acceptance criteria and the recovery is > 10%.
1. Estimate (J, UJ) all positive and non-detected results if any two surrogates are < the QC acceptance criteria.
2. Estimate (J) all positive results if any two surrogates are > the QC acceptance criteria.
3. Reject (R) all non-detected results and estimate (J) all positive results if any one surrogate is < 10%.

Sample Results	One or more surrogates < 10%	Two or more surrogates 10% ≤ %R < LL	All surrogates LL ≤ %R ≤ UL	Two or more surrogates > UL
Detects	J	J	A	J
Non-detects	R	UJ	A	A

LL - Lower Limit UL - Upper Limit

Validator: _____ Date: 5/29/13

EPA - NE - Data Validation Worksheets
Forms 7J, 7L, and 7N

All Criteria Met _____

III. PESTICIDE CONTINUING CALIBRATION

Continuing Calibration - PEM, INDC

List the compounds which did not meet the percent difference (%D) criteria of < 25% on either column (PEST), ≤ 15% opening (PCB), ≤ 50% closing (PCB).

Date	Compound	%D		Samples Affected
		Column I	Column II	
10:39 4/26/13	Aroclor 1254 pk 5	17.2		A4B44MS, A4B44MSD
	pk 3		22.3	

no 1254 MS/MSD

Qualification of data:

Estimate (J) all positive results when the %D >25% Pest, or ≥ 15% PCB. No qualification is required for non-detected results.

Validator: JCBurton

Date: 5/29/13

EPA - NE - Data Validation Worksheets
Form 10

All Criteria Met _____

Case: 43392
SDG: A4B36

Site Name: JARD Company
Page ___ of ___

Sample No.	Compound	Column I	Column II	%D	Action	Comments
A4B41	1242	930	720	29.2	J	
A4B42	1242	1100	1400	27.3	J	
A4B42DL	1242	700	910	30.0	J	
A4B47	1242	1000	790	26.6	J	
A4B47DL	1242	1400	1000	40.0	J	
A4B41DL	1242	1000	630	45.4	J	

Use Comments section to list compounds that went to "U" due to Blank Contamination Actions or Co-elution with Aroclors.

Actions:

J - Estimate results when %D > 25% but ≤100% for pesticides or %D >25% but ≤500% for PCBs.
J@ - %D >25% but ≤100% for pesticides or %D > 25% but ≤500% for PCBs. Previously qualified as estimated by laboratory due to quantitation below the quantitation limit. No further qualification is needed.
R - Reject results when %D >100 for pesticides or %D >500% for PCBs.
U - Qualify result as undetected at the CRQL when %D >100% for pesticides or %D >500% for PCBs and both results are < the CRQL.
U* - Report the non-detected result from the diluted analysis.
U^ - Compound not confirmed by GC/MS. Raise detection limit to reported concentration.
DL - Report the result from the diluted analysis.

Validator: _____ Date: 5/29/13

107, MW-2, MW-3, MW-3D, MW-6, MW-6D, MW-9D, and MW-11. Based on the above information, START personnel planned to purge/develop monitoring wells MW-2, MW-3, MW-3D, MW-6, and MW-6D on 28 March 2013.

1630 hrs: START personnel marked properties located along Park Street and Bowen Road for Dig Safe notification. Following dig safe marking; START personnel secured and departed the site.

28 March 2013 (Thursday) – Site Reconnaissance, Well Development

Weather: Cloudy, high 30 to low 40 °F

0700 hrs: START members Kelly, Hornok, Bitzas, and Robinson arrived at the Jard property. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O_2, H_2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm.

0715 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, potential weather issues), chemical hazards [PCBs, non-aqueous phase liquids (NAPL) containing water], Radiation (Not encountered previously) and biological hazards (ticks, poison ivy, animals). Personnel reviewed and signed the HASP documentation, as needed.

0800 hrs: START personnel began purging/developing the selected ground water monitoring wells using a Wattera inertia pump system with dedicated tubing, check valve, and surge block at each well. START personnel established on site investigative derived waste (IDW) staging area along west side of Source Pile, on asphalt pavement area/driveway. Location will allow truck for IDW pickup to enter and exit site easily. Staging area consists of 55-gallon drums placed on wooden pallets.

0900 hrs: START PL. Kelly discussed with CORs Bosworth and Smith regarding status of the monitoring well examination, and selection of wells to be purged and sampled. CORs agreed with selection of wells to be sampled.

START personnel continued well purging operations. For the monitoring wells selected for redevelopment/purging, the purge volume in approximate (~) gallons is listed for each well. The following ~ volumes of ground water and/or material were purged from the groundwater wells listed above: MW-2: ~10 gallons; MW-3: ~10 gallons; MW-3D: ~20 gallons; MW-6: ~5 gallons; and MW-6D: ~ 30 gallons. Approximately 4.5 feet of silt material was removed from ground water monitoring well MW-6D. In addition, a very thin NAPL with a greasy feel, along with black oil-like droplets, and a rainbow sheen were observed in IDW purge water removed from MW-3, MW-3D, and MW-6D.

1330 hrs: START personnel secured the groundwater monitoring well IDW purge water drums, secured the site and departed the Jard property.

1 April 2013 (Monday) – Soil/Source Sampling

Weather: Cloudy, some rain, 45 to 50 °F

1045 hrs: START members Kelly, Hornok, Bitzas, Imbres, Robinson, and Jonathan Saylor arrived at the Jard property.

1100 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, heavy lifting, Geoprobe Work concerns, potential adverse weather conditions), chemical hazards (PCBs), Radiation (Not encountered previously but will be monitored) and biological hazards (ticks, poison ivy, animals). Personnel reviewed and signed

the HASP documentation, as needed. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O_2, H_2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm. START Team established decontamination area.

1115 hrs: START personnel began decontaminating non-dedicated field sampling equipment including Geoprobe macrocores and cutting shoes, hand augers, metal scoops, and low-flow bladder pumps. Non-dedicated equipment (Geoprobe equipment, augers, metal scoops, etc.) will be decontaminated after the collection of each sample, and prior to use for the collection of other samples.

1400 hrs: Began soil boing activities with the Geoprobe at soil boring location SB-01 located on the south-central area of the former building footprint in an area previously excavated during an EPA Removal action. An EPA removal action was completed at the site during 2007 where the building was razed, a portion of the concrete foundation was removed, and a permeable earthen cap was installed to limit exposure to contaminated soils. Boring activities as part of the Site Reassessment were targeted at the area of the foundation removal and soil excavation (southern portion of the former building footprint).

Sampling on the Jard property and surrounding properties for solid matrices (soil/source, surface soil, and sediment) will be conducted as follows, unless otherwise noted: locations will be designated prior to initiation of sampling activities; at each location, sampling depth will be determined based on sampling objectives and/or materials encountered; for each sampled depth interval at each location, material will be placed in a large polyethylene bag (12 by 15 inches); the material will then be homogenized completely in the bag; the material will later be described by a licensed professional geologist using the modified Burmiester soil classification system and a small sample aliquot will be collected for PCB field screening analysis performed by the US EPA Mobile Laboratory personnel; based on field screening results and sampling objectives, a subset of samples will be selected for further analysis via Contract Laboratory Program (CLP) Aroclor analysis; samples selected for CLP analysis will be aliquoted with sufficient quality assurance/quality control (QA/QC) volume; all solid matrix samples submitted for CLP Aroclor analysis will also be aliquoted for potential congener analysis, unless otherwise noted; following receipt of CLP Aroclor analytical results, a smaller subset of samples will then be selected and submitted for congener analysis. A separate field data sheet will be completed by the field sampler for each sample collected to document relevant information and to supplement field logbook notes.

Additional START personnel performed bump checks on calibrated YSI 550 pH/oxidation reduction potential (ORP)/Conductivity probes for ground water sampling scheduled to be completed on 2 April 2013. All the calibrated ground water sampling equipment was working properly (See calibration log sheets).

1415 hrs: Soil/source sample SB-01A (Sample #: JCS-128) was collected using a Geoprobe macrocore from a depth of 2.7 to 4 feet bgs from soil boring SB-01 and later submitted for PCB field screening analysis.

1420 hrs: Soil/source sample SB-01B (Sample #: JCS-129) was collected using a Geoprobe macrocore from a depth of 6.9 to 8 feet bgs from soil boring SB-01 and later submitted for PCB field screening analysis.

1430 hrs: Soil/source sample SB-01C (Sample #: JCS-130) was collected using a Geoprobe macrocore from a depth of 10.4 to 12 feet bgs from soil boring SB-01 and later submitted for PCB field screening analysis.

1440 hrs: Soil/source sample SB-01D (Sample #: JCS-131) was collected using a Geoprobe macrocore from a depth of 12 to 14 feet bgs from soil boring SB-01 and later submitted for PCB field screening analysis.

1500 hrs: START personnel completed soil boing activities at location SB-01. Soil boring SB-01 was completed to a depth of 14 feet bgs due to refusal. See the soil Boring Logs for complete descriptions of the boring completed. The soil boring was backfilled with sand and bentonite. START personnel relocated to and began boring activities at soil boring location SB-02 located on the south-central area of the former building footprint in an area previously excavated during an EPA Removal action.

1520 hrs: Soil/source sample SB-02A (Sample #: JCS-132) was collected using a Geoprobe macrocore from a depth of 2.2 to 4 feet bgs from soil boring SB-02 and later submitted for PCB field screening analysis.

1530 hrs: Soil/source sample SB-02B (Sample #: JCS-133) was collected using a Geoprobe macrocore from a depth of 6.9 to 8 feet bgs from soil boring SB-02 and later submitted for PCB field screening analysis.

1540 hrs: Soil/source sample SB-02C (Sample #: JCS-134) was collected using a Geoprobe macrocore from a depth of 8.8 to 10 feet bgs from soil boring SB-02 and later submitted for PCB field screening analysis.

1545 hrs: START personnel completed soil boing activities at location SB-02. Soil boring SB-02 was completed to a depth of 10 feet bgs due to refusal. Evidence (piece of) the orange snow fence layer installed as part of the earthen cap construction was encountered at 2.5 feet bgs. See the soil Boring Logs for complete descriptions of the boring completed. The soil boring was backfilled with sand and bentonite. START personnel relocated to and began boring activities at soil boring location SB-03, located on the south-central capped area, adjacent to ground water monitoring wells MW-3 and MW-3D.

1555 hrs: Soil/source sample SB-03A (Sample #: JCS-135) was collected using a Geoprobe macrocore from a depth of 0.7 to 2.6 feet bgs from soil boring SB-03 and later submitted for PCB field screening analysis.

1605 hrs: Soil/source sample SB-03B (Sample #: JCS-136) was collected using a Geoprobe macrocore from a depth of 4.8 to 6.5 feet bgs from soil boring SB-03 and later submitted for PCB field screening analysis.

1610 hrs: START personnel completed soil boing activities at location SB-03. Soil boring SB-03 was completed to a depth of 6.5 feet bgs due to refusal. The soil boring was backfilled with sand and bentonite. START personnel completed soil boring activities for the day.

1630 hrs: Equipment rinsate blank sample RB-01 (Sample #: JCW-013; CLP #: A4B02) was collected from the Geoprobe macrocore system sampling equipment and is associated with soil/source sampling activities conducted on 1 April 2013.

1700 hrs: START personnel secured the site and departed the Jard property.

2 April 2013 (Tuesday) – Ground Water Sampling

Weather: Cloudy, little precipitation, low 30 °F

0700 hrs: START members Kelly, Hornok, Bitzas, Imbres, Robinson, and Saylor arrived at the Jard property.

0715 hrs: START HSC Kelly HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, potential weather issues), chemical hazards [PCBs, non-aqueous phase liquids (NAPL) containing water], Radiation (Not encountered previously) and biological hazards (ticks, poison ivy, animals). Personnel reviewed and signed the HASP documentation, as needed. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O_2, H_2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm. Note that the ground

1215 hrs: START personnel continued to complete CLP documentation and to package ground water and rinsate blank samples for shipment to the CLP Laboratory located in Mountainside, New Jersey. START geologist Kelly continued to conduct classification of sample matrix materials using the modified Burmiester soil classification and to prepare sample aliquots for field screening.

1540 hrs: Equipment rinsate blank sample RB-02 (Sample #: JCW-016: CLP #: A4B05) was collected from a hand auger sampling equipment (augers, scoops, etc.) and is associated with soil/source sampling activities.

1630 hrs: START personnel completed sample shipment preparation, organized and packaged traffic reports. START member Bitzas left the site and proceeded to deliverer samples and paperwork to FedEx, located in Menands, New York for shipment. Below is a summary of the traffic reports (TR), Airbill numbers (AB), and samples sent to the CLP Organics Laboratory (Chemtech Consulting Group) for PCB Aroclor analysis:

TR #: 1-040313-081601-0001, Master AB #: 5141 2418 0581, four groundwater samples for PCB Aroclor analysis. These four samples were shipped as dangerous goods due to previous sampling results and field observations and were to be combined with samples shipped under TR #: 1-040313-083108-0002 AB #: 5141 2418 0559, to constitute a complete sample delivery group (SDG) with appropriate quality assurance/quality control (QA/QC) samples.

TR #: 1-040313-083108-0002 AB #: 5141 2418 0559, seven ground water samples including one field duplicate, and one MS/MSD; plus two rinsate blank, and two performance evaluation samples for PCB Aroclor analysis. Samples from this TR were to be combined with samples shipped under TR #: 1-040313-081601-0001, Master AB #: 5141 2418 0581, to form a complete SDG.

1700 hrs: START personnel secured IDW drums, secured the site and departed the Jard property.

4 April 2013 (Thursday) – Soil/Source Sampling

Weather: Sunny, 45 to 50 °F

0700 hrs: START members Kelly, Hornok, Bitzas, Imbres, Robinson, and Jonathan Saylor arrived at the Jard property.

0715 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, heavy lifting, traffic concerns, potential adverse weather conditions), chemical hazards (PCBs), Radiation (Not encountered previously but will be monitored) and biological hazards (ticks, poison ivy, animals). Personnel reviewed and signed the HASP documentation, as needed. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O2, H2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm.

START Team established decontamination area and conduct decontamination of non-dedicated equipment. Non-dedicated equipment (augers, metal scoops, etc.) will be decontaminated after the collection of each sample, and prior to use for the collection of other samples.

0800 hrs: Soil/source sample SO-24A (Sample #: JCS-078) was collected with a hand auger at a depth of 0 to 8 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

In addition, soil/source sample SO-25A (Sample #: JCS-028) was collected with a hand auger at a depth of 0 to 12 inches bgs from the drainage ditch located on the western portion of the Jard property and later submitted for PCB field screening analysis.

Soil/source sample SO-50A (Sample #: JCS-066) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

0805 hrs: Soil/source sample SO-24B (Sample #: JCS-079) was collected with a hand auger at a depth of 8 to 24 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0810 hrs: Soil/source sample SO-25B (Sample #: JCS-029) was collected with a hand auger at a depth of 12 to 30 inches bgs from the drainage ditch located on the western portion of the Jard property and later submitted for PCB field screening analysis.

In addition, soil/source sample SO-24C (Sample #: JCS-080) was collected with a hand auger at a depth of 24 to 30 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

Soil/source sample SO-50B (Sample #: JCS-067) was collected with a hand auger at a depth of 12 to 16 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

0815 hrs: Soil/source sample SO-25C (Sample #: JCS-030) was collected with a hand auger at a depth of 30 to 48 inches bgs from the drainage ditch located on the western portion of the Jard property and later submitted for PCB field screening analysis.

0818 hrs: Soil/source sample SO-51A (Sample #: JCS-068) was collected with a hand auger at a depth of 0 to 6 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

0823 hrs: Soil/source sample SO-26A (Sample #: JCS-031) was collected with a hand auger at a depth of 0 to 12 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0826 hrs: Soil/source sample SO-52A (Sample #: JCS-069) was collected with a hand auger at a depth of 0 to 4 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

0830 hrs: Soil/source sample SO-27A (Sample #: JCS-036) was collected with a hand auger at a depth of 0 to 18 inches bgs from the drainage ditch located on the western portion of the Jard property and later submitted for PCB field screening analysis.

0833 hrs: Soil/source sample SO-26B (Sample #: JCS-032) was collected with a hand auger at a depth of 12 to 18 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0835 hrs: Soil/source sample SO-27B (Sample #: JCS-038) was collected with a hand auger at a depth of 18 to 24 inches bgs from the drainage ditch located on the western portion of the Jard property and later submitted for PCB field screening analysis.

0836 hrs: Soil/source sample SO-26C (Sample #: JCS-033) was collected with a hand auger at a depth of 18 to 24 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0840 hrs: Soil/source sample SO-26D (Sample #: JCS-034) was collected with a hand auger at a depth of 24 to 36 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0845 hrs: Soil/source sample SO-29A (Sample #: JCS-040) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area located along the western boundary of the Jard property and later submitted for PCB field screening analysis.

0850 hrs: Soil/source sample SO-26E (Sample #: JCS-035) was collected with a hand auger at a depth of 36 to 42 inches bgs from the drainage ditch located on the northwestern portion of the Jard property and later submitted for PCB field screening analysis.

0900 hrs: Soil/source sample SO-31A (Sample #: JCS-043) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area located along the western boundary of the Jard property and later submitted for PCB field screening analysis.

0905 hrs: Soil/source sample SO-28A (Sample #: JCS-039) was collected with a hand auger at a depth of 0 to 8 inches bgs from the area located along the western boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-31B (Sample #: JCS-044) was collected with a hand auger at a depth of 12 to 24 inches bgs from the area located along the western boundary of the Jard property and later submitted for PCB field screening analysis.

0920 hrs: Soil/source sample SO-30A (Sample #: JCS-041) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area located along the southwestern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-33A (Sample #: JCS-081) was collected with a hand auger at a depth of 0 to 18 inches bgs from the area located along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

0930 hrs: Soil/source sample SO-30B (Sample #: JCS-042) was collected with a hand auger at a depth of 12 to 24 inches bgs from the area located along the southwestern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-33B (Sample #: JCS-082) was collected with a hand auger at a depth of 18 to 30 inches bgs from the area located along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

0935 hrs: Soil/source sample SO-33C (Sample #: JCS-083) was collected with a hand auger at a depth of 30 to 36 inches bgs from the area located along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

0940 hrs: Soil/source sample SO-32A (Sample #: JCS-045) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area located along the southwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1035 hrs: Soil/source sample SO-35A (Sample #: JCS-047) was collected with a hand auger at a depth of 0 to 12 inches bgs from the southwestern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1045 hrs: Soil/source sample SO-37A (Sample #: JCS-049) was collected with a hand auger at a depth of 0 to 6 inches bgs from the southwestern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-53A (Sample #: JCS-084) was collected with a hand auger at a depth of 0 to 12 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

1055 hrs: Soil/source sample SO-39A (Sample #: JCS-051) was collected with a hand auger at a depth of 0 to 12 inches bgs from the southwestern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-54A (Sample #: JCS-085) was collected with a hand auger at a depth of 0 to 8 inches bgs from the area below the former transformer area located on the southern portion of the Jard property and later submitted for PCB field screening analysis.

1100 hrs: Soil/source sample SO-39B (Sample #: JCS-052) was collected with a hand auger at a depth of 12 to 24 inches bgs from the southwestern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
START geologist Kelly continued to conduct classification of sample matrix materials using the modified Burmiester soil classification and to prepare sample aliquots for field screening.

1110 hrs: Soil/source sample SO-41A (Sample #: JCS-054) was collected with a hand auger at a depth of 0 to 8 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1120 hrs: Soil/source sample SO-41B (Sample #: JCS-055) was collected with a hand auger at a depth of 8 to 18 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1125 hrs: Soil/source sample SO-41C (Sample #: JCS-056) was collected with a hand auger at a depth of 18 to 30 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1145 hrs: Soil/source sample SO-34A (Sample #: JCS-046) was collected with a hand auger at a depth of 0 to 12 inches bgs from the upper northeastern portion of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-43A (Sample #: JCS-058) was collected with a hand auger at a depth of 0 to 12 inches bgs from the southwestern toe slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1150 hrs: Soil/source sample SO-45A (Sample #: JCS-060) was collected with a hand auger at a depth of 0 to 18 inches bgs from the western toe slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1210 hrs: Soil/source sample SO-47A (Sample #: JCS-062) was collected with a hand auger at a depth of 0 to 6 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1210 hrs: START Member Hornok contacted and discussed sampling progress with COR Bosworth. Discussed number of samples collected to date, groundwater well sampling status, difficulties source sampling to depth on the upper portion of the source pile, source areas along western property boundary, and planned field screening and sampling activities. Scott Clifford (EPA Chemist) will be on site on Monday (4/8/13).

1225 hrs: Soil/source sample SO-38A (Sample #: JCS-050) was collected with a hand auger at a depth of 0 to 8 inches bgs from the upper northern portion of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1230 hrs: Soil/source sample SO-36A (Sample #: JCS-048) was collected with a hand auger at a depth of 0 to 12 inches bgs from the upper northern portion of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-49A (Sample #: JCS-064) was collected with a plastic scoop at a depth of 0 to 3 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1235 hrs: Soil/source sample SO-55A (Sample #: JCS-070) was collected with a plastic scoop at a depth of 0 to 4 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1350 hrs: Soil/source sample SO-56A (Sample #: JCS-071) was collected with a hand auger at a depth of 0 to 12 inches bgs from the western toe slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1405 hrs: Soil/source sample SO-57A (Sample #: JCS-072) was collected with a hand auger at a depth of 0 to 6 inches from the western toe slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1415 hrs: Soil/source sample SO-40A (Sample #: JCS-053) was collected with a hand auger at a depth of 0 to 8 inches bgs from the upper northwestern portion of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1420 hrs: Soil/source sample SO-42A (Sample #: JCS-057) was collected with a hand auger at a depth of 0 to 12 inches bgs from the northern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1425 hrs: Soil/source sample SO-59A (Sample #: JCS-074) was collected with a metal scoop at a depth of 0 to 4 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1430 hrs: Soil/source sample SO-58A (Sample #: JCS-073) was collected with a metal scoop at a depth of 0 to 2 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1435 hrs: Soil/source sample SO-60A (Sample #: JCS-075) was collected with a hand auger at a depth of 0 to 12 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1438 hrs: Soil/source sample SO-46A (Sample #: JCS-061) was collected with a hand auger at a depth of 0 to 8 inches from the northern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1440 hrs: Soil/source sample SO-44A (Sample #: JCS-059) was collected with a hand auger at a depth of 0 to 6 inches bgs from the northern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1505 hrs: Soil/source sample SO-61A (Sample #: JCS-182) was collected with a hand auger at a depth of 0 to 12 inches from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1515 hrs: Soil/source sample SO-63A (Sample #: JCS-077) was collected with a hand auger at a depth of 0 to 8 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1520 hrs: Soil/source sample SO-62A (Sample #: JCS-076) was collected with a hand auger at a depth of 0 to 12 inches from the northern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-64A (Sample #: JCS-183) was collected with a hand auger at a depth of 0 to 4 inches from the northern slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1630 hrs: Soil/source sample SO-48A (Sample #: JCS-063) was collected with a plastic scoop at a depth of 0 to 3 inches bgs from the western slope of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1700 hrs: Equipment rinsate blank sample RB-03 (Sample #: JCW-017: CLP #: A4B06) was collected from hand auger sampling equipment (augers, scoops, etc.) associated with soil/source sampling activities.

1705 hrs: Equipment rinsate blank sample RB-04 (Sample #: JCW-018: CLP #: A4B07) was collected from hand auger sampling equipment (augers, scoops, etc.) associated with soil/source sampling activities.

1730 hrs: START personnel secured IDW drums, secured the site and departed the Jard property.

5 April 2013 (Friday) – Soil/Source Sampling

Weather: Partly cloudy, low 50 °F

0730 hrs: START members Kelly, Hornok, Bitzas, Imbres, Robinson, and Jonathan Saylor arrived at the Jard property. COR Bosworth also arrived on site for meeting with EPA and town representatives.

0745 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven

START members Hornok and Kelly spoke with a VTrans representative at the Bowen Road facility regarding leaving the Geoprobe Truck secured on the VTDOT property for the weekend in an effort to be more sustainable/"Green". The VTrans representative agreed and explained there security for the weekend hours and where it would be best to park the vehicle. Informed PM McDuffee agreed to plan.

1230 hrs: Remaining START personnel secured IDW drums, secured the site and departed the Jard property for the START office located in Andover, MA.

8 April 2013 (Monday) – Soil/Source Sampling

Weather: Partly sunny, high 50 to low 60 °F

1030 hrs: START members Kelly, Hornok, Bitzas, Eric Ackerman, Chris Dupree, Robinson, Jonathan Saylor, and Robert Sharp arrived at the Jard property. START Member Hornok picked up Geoprobe truck from VT DOT facility along Bowen Road. In addition, EPA SAM Martha Bosworth had already arrived on-site.

1045 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, heavy lifting, Geoprobe Work concerns, potential adverse weather conditions), chemical hazards (PCBs), Radiation (Not encountered previously but will be monitored) and biological hazards (ticks, poison ivy, dogs, animals). Personnel reviewed and signed the HASP documentation, as needed. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O2, H2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm.

START Team established decontamination area and conduct decontamination of non-dedicated equipment. Non-dedicated equipment (Geoprobe equipment, augers, metal scoops, etc.) will be decontaminated after the collection of each sample, and prior to use for the collection of other samples.

1100 hrs: Soil boring activities began at soil boring location SB-05 located on the south-eastern area of the former building footprint in an area previously excavated during an EPA Removal action. In addition, EPA Office of Environmental Measurement and Evaluation (OEME) Mobile Laboratory chemist Scott Clifford arrived on-site to perform PCB field screening analysis. Sample aliquots for PCB field screening, collected to date between 1 April and 5 April, were transferred to EPA chemist Clifford for processing and PCB field screening analyses.

START geologist Kelly continued to conduct classification of sample matrix materials using the modified Burmiester soil classification and to prepare sample aliquots for field screening.

1130 hrs: Soil/source sample SB-05A (Sample #: JCS-137) was collected using a Geoprobe macrocore from a depth of 2.1 to 4 feet bgs from soil boring SB-05 and later submitted for PCB field screening analysis.

1135 hrs: Soil/source sample SB-05B (Sample #: JCS-138) was collected using a Geoprobe macrocore from a depth of 5.3 to 5.6 feet bgs from soil boring SB-05 and later submitted for PCB field screening analysis.

1140 hrs: START personnel completed soil boring activities at location SB-05. Soil boring SB-05 was completed to a depth of 6 feet bgs due to refusal. Team backfilled hole with sand and bentonite and relocated to next location. Boring activities began at soil boring location SB-07 located on the south-eastern area of the former building footprint in an area previously excavated during an EPA Removal action.

1145 hrs: Soil/source sample SB-07A (Sample #: JCS-139) was collected using a Geoprobe macrocore from a depth of 2 to 2.9 feet bgs from soil boring SB-07 and later submitted for PCB field screening analysis.

1155 hrs: START personnel completed soil boring activities at location SB-07. Soil boring SB-07 was completed to a depth of 4 feet bgs due to refusal. Team backfilled hole with sand and bentonite and relocated to next location. Boring activities began at soil boring location SB-09 located on the south-eastern area of the former building footprint in an area previously excavated during an EPA Removal action. In addition, boring activities began at soil boring location SB-04 located beneath the former transformer area located on the southern portion of the Jard property.

1210 hrs: Soil/source sample SB-09A (Sample #: JCS-140) was collected using a Geoprobe macrocore from a depth of 2.9 to 3.4 feet bgs from soil boring SB-09 and later submitted for PCB field screening analysis.

In addition, soil/source sample SB-09B (Sample #: JCS-141) was collected using a Geoprobe macrocore from a depth of 3.4 to 4 feet bgs from soil boring SB-09 and later submitted for PCB field screening analysis.

1215 hrs: START Member Kelly decided to collect an additional sample from upper core section to obtain analyses throughout the core section. Soil/source sample SB-09C (Sample #: JCS-142) was collected using a Geoprobe macrocore from a depth of 1.7 to 2.9 feet bgs from soil boring SB-09 and later submitted for PCB field screening analysis.

1220 hrs: Soil/source sample SB-04A (Sample #: JCS-145) was collected using a Geoprobe macrocore from a depth of 1.1 to 1.3 feet bgs from soil boring SB-04 and later submitted for PCB field screening analysis.

In addition, soil/source sample SB-04B (Sample #: JCS-146) was collected using a Geoprobe macrocore from a depth of 1.3 to 2 feet bgs from soil boring SB-04 and later submitted for PCB field screening analysis.

1230 hrs: START personnel completed soil boring activities at location SB-04. Soil boring SB-04 was completed to a depth of 2 feet bgs due to refusal. Team backfilled hole with sand and bentonite and relocated to next location. Boring activities began at soil boring location SB-06 located on the south-western area of the former building footprint in an area previously excavated during an EPA Removal action.

1235 hrs: Soil/source sample SB-06A (Sample #: JCS-147) was collected using a Geoprobe macrocore from a depth of 2.3 to 3.3 feet bgs from soil boring SB-06 and later submitted for PCB field screening analysis.

In addition, soil/source sample SB-06B (Sample #: JCS-148) was collected using a Geoprobe macrocore from a depth of 3.3 to 4 feet bgs from soil boring SB-06 and later submitted for PCB field screening analysis.

1240 hrs: After reviewing the entire core, START Member Kelly decided to collect an additional sample from upper core section to obtain analyses throughout the core to represent various depths. Soil/source sample SB-06C (Sample #: JCS-149) was collected using a Geoprobe macrocore from a depth of 1.5 to 2.3 feet bgs from soil boring SB-06 and later submitted for PCB field screening analysis.

1245 hrs: START personnel completed soil boring activities at location SB-06. Soil boring SB-06 was completed to a depth of 4 feet bgs due to refusal. Team backfilled hole with sand and bentonite and relocated to next location.

1250 hrs: Soil/source sample SB-09D (Sample #: JCS-143) was collected using a Geoprobe macrocore from a depth of 7.4 to 8 feet bgs from soil boring SB-09 and later submitted for PCB field screening analysis.

1255 hrs: Soil/source sample SB-09E (Sample #: JCS-144) was collected using a Geoprobe macrocore from a depth of 10.1 to 11 feet bgs from soil boring SB-09 and later submitted for PCB field screening analysis.

1300 hrs: START personnel completed soil boring activities at location SB-09. Soil boring SB-09 was completed to a depth of 11 feet bgs. Team backfilled hole with sand and bentonite and relocated to next location. Boring activities began at soil boring location SB-08 located on the south-eastern area of the former building footprint in an area previously excavated during an EPA Removal action.

1345 hrs: Soil/source sample SB-08A (Sample #: JCS-150) was collected using a Geoprobe macrocore from a depth of 1.2 to 4 feet bgs from soil boring SB-08 and later submitted for PCB field screening analysis.

1350 hrs: Soil/source sample SB-08B (Sample #: JCS-151) was collected using a Geoprobe macrocore from a depth of 6.9 to 8 feet bgs from soil boring SB-08 and later submitted for PCB field screening analysis.

1400 hrs: Soil/source sample SB-08C (Sample #: JCS-152) was collected using a Geoprobe macrocore from a depth of 8.7 to 10 feet bgs from soil boring SB-08 and later submitted for PCB field screening analysis.
In addition, soil/source sample SB-08D (Sample #: JCS-153) was collected using a Geoprobe macrocore from a depth of 10 to 11 feet bgs from soil boring SB-08 and later submitted for PCB field screening analysis.

1410 hrs: START personnel completed soil boring activities at location SB-08. Soil boring SB-08 was completed to a depth of 11 feet bgs due to equipment issues (stuck). Team did not backfilled hole, will work to retrieve equipment later and backfill with sand and bentonite; relocated to next location. Boring activities began at soil boring location SB-10 located on the eastern edge of the former building footprint in an area previously excavated during an EPA Removal action.
In addition, soil/source sample SO-81A (Sample #: JCS-106) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1415 hrs: Soil/source sample SO-80A (Sample #: JCS-103) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-82A (Sample #: JCS-109) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1420 hrs: Soil/source sample SO-81B (Sample #: JCS-107) was collected with a hand auger at a depth of 18 to 36 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1425 hrs: Soil/source sample SO-80B (Sample #: JCS-104) was collected with a hand auger at a depth of 18 to 30 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-81C (Sample #: JCS-108) was collected with a hand auger at a depth of 36 to 54 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-82B (Sample #: JCS-110) was collected with a hand auger at a depth of 18 to 30 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1435 hrs: Soil/source sample SO-80C (Sample #: JCS-105) was collected with a hand auger at a depth of 30 to 40 inches bgs from an area along the northwestern boundary of the Jard property and later submitted for PCB field screening analysis.

1445 hrs: Soil/source sample SO-83A (Sample #: JCS-111) was collected with a hand auger at a depth of 0 to 12 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-84A (Sample #: JCS-112) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1450 hrs: Soil/source sample SO-85A (Sample #: JCS-114) was collected with a hand auger at a depth of 0 to 12 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1455 hrs: Soil/source sample SO-84B (Sample #: JCS-113) and soil/source sample field duplicate SO-102B (Sample #: JCS-207) were collected with a hand auger at a depth of 18 to 36 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1500 hrs: Soil/source sample SO-85B (Sample #: JCS-115) and soil/source sample field duplicate SO-101B (Sample #: JCS-206) were collected with a hand auger at a depth of 12 to 24 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1510 hrs: Soil/source sample SO-85C (Sample #: JCS-116) was collected with a hand auger at a depth of 24 to 30 inches from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-86A (Sample #: JCS-117) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.
Soil/source sample SO-87A (Sample #: JCS-118) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1520 hrs: Soil/source sample SO-87B (Sample #: JCS-119) was collected with a hand auger at a depth of 18 to 36 inches bgs from an area along the northern boundary of the Jard property and later submitted for PCB field screening analysis.

1530 hrs: Soil/source sample SO-88A (Sample #: JCS-120) was collected with a hand auger at a depth of 0 to 18 inches bgs from an area along the eastern edge of the building footprint on the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-89A (Sample #: JCS-122) was collected with a hand auger at a depth of 0 to 12 inches bgs from the northeastern corner of the Jard property and later submitted for PCB field screening analysis.

1535 hrs: Soil/source sample SO-88B (Sample #: JCS-121) was collected with a hand auger at a depth of 18 to 30 inches bgs from along the eastern edge of the building footprint on the Jard property and later submitted for PCB field screening analysis.

1540 hrs: Soil/source sample SO-89B (Sample #: JCS-123) was collected with a hand auger at a depth of 12 to 24 inches bgs from the northeastern corner of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SO-90A (Sample #: JCS-124) was collected with a hand auger at a depth of 0 to 18 inches bgs from along the eastern edge of the pile located on the eastern portion of the Jard property and later submitted for PCB field screening analysis.

1545 hrs: Soil/source sample SO-91A (Sample #: JCS-125) was collected with a hand auger at a depth of 0 to 10 inches from the northeastern corner of the Jard property and later submitted for PCB field screening analysis.
In addition, soil/source sample SB-10A (Sample #: JCS-154) was collected using a Geoprobe macrocore from a depth of 0.4 to 1.3 feet bgs from soil boring SB-10 and later submitted for PCB field screening analysis.

1600 hrs: START personnel completed soil boring activities at location SB-10. Soil boring SB-10 was completed to a depth of 2 feet bgs due to refusal. Team backfilled sample hole with sand and bentonite.
Soil/source sample SO-92A (Sample #: JCS-126) was collected with a hand auger at a depth of 0 to 8 inches from the northeastern corner of the Jard property and later submitted for PCB field screening analysis.

1615 hrs: Soil/source sample SO-93A (Sample #: JCS-127) was collected with a plastic scoop at a depth of 0 to 2 inches bgs from an area along the northeastern edge of the building footprint on the Jard property and later submitted for PCB field screening analysis.

1635 hrs: Equipment rinsate blank sample RB-06 (Sample #: JCW-020: CLP #: A4B09) was collected from hand auger sampling equipment (augers, scoops, etc.) associated with soil/source sampling activities.

1640 hrs: Equipment rinsate blank sample RB-07 (Sample #: JCW-021: CLP #: A4B10) was collected from the Geoprobe macrocore system sampling equipment and is associated with soil/source sampling activities.

1700 hrs: START personnel secured IDW drums, secured the site and departed the Jard property.

9 April 2013 (Tuesday) – Soil/Source and Surface Soil Sampling

Weather: Cloudy, high 50 to low 60 °F

0700 hrs: START members Kelly, Hornok, Bitzas, Ackerman, Dupree, Robinson, Saylor, and Sharp arrived at the Jard property. EPA SAM Martha Bosworth had previously arrived on-site. In addition, Chemist Clifford also arrived on-site.

0715 hrs: START HSC Kelly reviewed the site HASP and conducted a tailgate health and safety meeting for all on-site START personnel, including reviews of the physical hazards (uneven terrain, trips-slips-falls, heavy lifting, traffic, potential adverse weather conditions), chemical hazards (PCBs), Radiation (Not encountered previously but will be monitored) and biological hazards (ticks, poison ivy, animals). Personnel reviewed and signed the HASP documentation, as needed. START members completed calibration checks on air monitoring instrument; MultiRAE Plus, LEL, O2, H2S, CO, and PID meter. Background ambient readings: LEL = 0%; O_2 = 20.9%; H_2S = 0 ppm; CO = 0 ppm; and VOC = 0 ppm.
START Team established decontamination area and conduct decontamination of non-dedicated equipment. Non-dedicated equipment (augers, metal scoops, etc.) will be decontaminated after the collection of each sample, and prior to use for the collection of other samples.

0800 hrs: START members Kelly, Robinson, and Scesny began marking sample locations and documenting property features on the Park Street residential properties.

0810 hrs: Soil/source sample SO-95A (Sample #: JCS-185) was collected with a hand auger at a depth of 0 to 8 inches bgs from an area along the northwestern edge of the building footprint on the Jard property and later submitted for PCB field screening analysis.

0815 hrs: Soil/source sample SO-94A (Sample #: JCS-184) was collected with a hand auger at a depth of 0 to 12 inches bgs from an area along the northwestern edge of the building footprint on the Jard property and later submitted for PCB field screening analysis.

A4B55 SDG# A4B54 @ 4/22/13

USEPA CLP Organics COC (LAB COPY) COPY **CHAIN OF CUSTODY RECORD**

No: 1-041713-120513-0009

DateShipped: 4/17/2013
CarrierName: FedEx
AirbillNo: 5141 2418 0802

Case #: 43392
Cooler #: RS0009

Lab: ChemTech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

HRS Reference #82

Organic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Inorganic Sample #	For Lab Use Only
A4B36	Soil/ START	Grab	CLP PCBs(21)	577 (4 C) (1)	JCS-060	04/04/2013 11:50		
A4B37	Soil/ START	Grab	CLP PCBs(21)	579 (4 C) (1)	JCS-476	04/04/2013 11:50		
A4B38	Soil/ START	Grab	CLP PCBs(21)	582 (4 C) (1)	JCS-072	04/04/2013 14:05		
A4B43	Soil/ START	Grab	CLP PCBs(21)	592 (4 C) (1)	JCS-125	04/08/2013 15:45		
A4B44	Soil/ START	Grab	CLP PCBs(21), CLP PCBs(21)	594 (4 C), 595 (4 C) (2)	JCS-116	04/08/2013 15:10		
A4B55	Soil/ START	Grab	CLP PCBs(21)	619 (4 C) (1)	JCS-477	04/17/2013 07:00		
A4B58	Soil/ START	Grab	CLP PCBs(21)	622 (4 C) (1)	JCS-480	04/17/2013 07:00		

Sample(s) to be used for Lab QC: A4B44 - Special Instructions: Please combine with samples shipped under FedEx Airbill #: 5141 2418 0754, COC #: 1-041713-120340-0008 to form one sample delivery group.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #
N/A

Analysis Key: CLP PCBs=SOM01.2 Aroclors

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Samples	C. Hornik	4/17/13	Airbill No. 5141 2418 0804	4/17/13	1300						
						Samples	Airbill No. 5141 2418 0804		Palak Shah	4/18/13	945

EPA sample: A4B44 is in SDG# A4B54 @ 5/9/13 Temp 5°C

10

SDG # A4B39 (8) 4/22/1

COPY

USEPA CLP Organics COC (LAB COPY)

DateShipped: 4/18/2013
CarrierName: FedEx
AirbillNo: 5141 2418 0960

CHAIN OF CUSTODY RECORD

Case #: 43392
Cooler #: DG Drums

No: 1-041713-120340-0008

Lab: ChemTech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

HRS Reference #82

Organic Sample #	Matrix/Sampler	Coll. Method	Analysis/Turnaround	Tag/Preservative/Bottles	Station Location	Collected	Inorganic Sample #	For Lab Use Only
A4B39	Soil/ START	Grab	CLP PCBs(21)	584 (4 C) (1)	JCS-126	04/08/2013 16:00		
A4B40	Soil/ START	Grab	CLP PCBs(21)	586 (4 C) (1)	JCS-182	04/04/2013 15:05		
A4B41	Soil/ START	Grab	CLP PCBs(21)	588 (4 C) (1)	JCS-069	04/04/2013 08:26		
A4B42	Soil/ START	Grab	CLP PCBs(21)	590 (4 C) (1)	JCS-084	04/04/2013 10:45		
A4B45	Soil/ START	Grab	CLP PCBs(21)	597 (4 C) (1)	JCS-078	04/04/2013 08:00		
A4B46	Soil/ START	Grab	CLP PCBs(21)	599 (4 C) (1)	JCS-029	04/04/2013 08:10		
A4B47	Soil/ START	Grab	CLP PCBs(21)	601 (4 C) (1)	JCS-039	04/04/2013 09:05		
A4B48	Soil/ START	Grab	CLP PCBs(21)	603 (4 C) (1)	JCS-040	04/04/2013 08:45		
A4B49	Soil/ START	Grab	CLP PCBs(21)	605 (4 C) (1)	JCS-043	04/04/2013 09:00		
A4B50	Soil/ START	Grab	CLP PCBs(21)	607 (4 C) (1)	JCS-044	04/04/2013 09:05		
A4B51	Soil/ START	Grab	CLP PCBs(21)	609 (4 C) (1)	JCS-042	04/04/2013 09:30		
A4B52	Soil/ START	Grab	CLP PCBs(21)	611 (4 C) (1)	JCS-131	04/01/2013 14:40		
A4B53	Soil/ START	Grab	CLP PCBs(21)	613 (4 C) (1)	JCS-135	04/01/2013 15:55		

Special Instructions: Samples shipped as dangerous goods due to elevated PCB concentrations noted in field screening analysis. Please combine these samples with samples shipped under Fedex Airbill # 5141 2418 0802, COC #: 1-041713-120513-0009 to create one SDG.

Temp: 6°C

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP PCBs=SOM01.2 Aroclors

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
Sampled		4/18/13	Airbill # 5141 2418 0960	4/18/13	1400						
						Sampled	Airbill # 5141 2418 0960			4/19/13	935

DG / ESAT

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET

FORM DC-2

Jard Company Weston

LABORATORY NAME : CHEMTECH CONSULTING GROUP, INC.

CITY / STATE : MOUNTAINSIDE, N.J

CASE NO : 43392 SDG NO : A4B36

SDG NOs TO FOLLOW N/A N/A

MOD. REF. NO. : N/A N/A

CONTRACT NO : EPW11030

SOW NO : SOM 01.2

MAY 10 2013

All documents delivered in the Complete SDG File (CSF) must be original documents where possible.

RECEIVED MAY 13 2013 By

		PAGE NOS: FROM	TO	CHECK LAB	USEPA (Weston)
1.	Inventory Sheet (DC-2) (Do not number)				
2.	SDG Narrative	1	8	✓	✓
3.	SDG Cover Sheet/Traffic Report	9	11	✓	✓
4.	**Trace Volatiles Data**				
	a. QC Summary				
	Deuterated Monitoring Compound Recovery (Form II VOA-1 and VOA-2)	NA	NA	—	NA
	Matrix Spike/Matrix Spike Duplicate Recover (Form III VOA) (if requested by USEPA Region)	NA	NA	—	
	Method Blank Summary (Form IV VOA)	NA	NA	—	
	GC/MS Instrument Performance Check (Form V VOA)	NA	NA	—	
	Internal Standard Area and RT Summary (Form VIII VOA)	NA	NA	—	
	b. Sample Data	NA	NA	—	
	TCL Results - Organics Analysis Data Sheet (Form I VOA-1 and VOA-2)				
	Tentatively Identified Compounds (Form I VOA-TIC)				
	Reconstructed total ion chromatograms (RIC) for each sample				
	For each sample:				
	Raw Spectra and background-subtracted mass spectra of target compounds identified				
	Quantitation reports				
	Mass Spectra of all reported TICs with three best library matches				
	c. Standards Data (All Instruments)	NA	NA		
	Initial Calibration Data (Form VI VOA-1, VOA-2, VOA-3)			—	
	RICs and Quantitaation Reports for all Standards				
	Continuing Calibration Data (Form VII VOA-1, VOA-2, VOA-3)				
	RICs and Quantitation Reports for all Standards				
	d. Raw/Quality Control				
	BFB	NA	NA	—	
	Blank Data	NA	NA	—	
	Matrix Spike/Matrix Spike Duplicate Data (if requested by USEPA Region)	NA	NA	—	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

e. Trace SIM Data (Place at the end of the Trace Volatiles Section	NA	NA	⌐	DA
[Form I VOA-SIM; Form II VOA-SIM1 and VOA-SIM2; Form IV-VOA-SIM; Form VI VOA-SIM; Form VII VOA-SIM; Form VIII VOA-SIM; and all raw data for QC, Samples, and Standards.]				
5. Low/Med Volatiles Data				
a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II VOA-1, VOA-2, VOA-3, VOA-4)	NA	NA	⌐	
Matrix Spike/Matrix Spike Duplicate Recovery (Form III VOA-1 and VOA-2) (if requested by USEPA Region)	NA	NA	⌐	
Method Blank Summary (Form IV VOA)	NA	NA	⌐	
GC/MS Instrument Performance Check (Form V VOA)	NA	NA	⌐	
Internal Standard Area and RT Summary (Form VIII VOA)	NA	NA	⌐	
b. Sample Data	NA	NA		
TCL Results - Organics Analysis Data Sheet (Form I VOA-1 and VOA-2)			⌐	
Tentatively Identified Compounds (Form I VOA-TIC)				
Reconstructed total ion chromatograms (RIC) for each sample				
For each sample:				
Raw Spectra and background-subtracted mass spectra of target compounds identified				
Quantitation reports				
Mass Spectra of all reported TICs with three best library matches				
c. Standards Data (All Instruments	NA	NA		
Initial Calibration Data (Form VI VOA-1, VOA-2, VOA-3)			⌐	
RICs and Quantitation Reports for all Standards				
Continuing Calibration Data (Form VII VOA-1, VOA-2, VOA-3)				
RICs and Quantitation Reports for all Standards				
d. Raw/Quality Control (QC)Data				
BFB	NA	NA	⌐	
Blank Data	NA	NA	⌐	
Matrix Spike/Matrix Spike Duplicate Data (if requested by USEPA Region)	NA	NA	⌐	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

6. **Semivolatiles Data**

a. QC Summary				
Deuterated Monitoring Compound Recovery (Form II SV-1, SV-2, SV-3, SV-4)	NA	NA	~	NA
Matrix Spike/Matrix Spike Duplicate Recovery Summary (Form III SV-1 and SV-2) (if requested by USEPA Region)	NA	NA	~	
Method Blank Summary (Form IV SV)	NA	NA	~	
GC/MS Instrument Performance Check (Form V SV)	NA	NA	~	
Internal Standard Area and RT Summary (Form VIII SV-1 and SV-2)	NA	NA	~	
b. Sample Data	NA	NA		
TCL Results - Organics Analysis Data Sheet (Form I SV-1 and SV-2)			~	
Tentatively Identified Compounds (Form I SV-TIC)				
Reconstructed total ion chromatograms (RIC) for each sample				
For each sample:	NA	NA		
Raw Spectra and background-subtracted mass spectra of target compounds			~	
Quantitation reports				
Mass Spectra of TICs with three best library matches				
GPC chromatograms (if GPC is r				
c. Standards Data (All Instruments)	NA	NA		
Initial Calibration Data (Form VI SV-1, SV-2, SV-3)			~	
RICs and Quantitation				
Continuing Calibration Data (Form VII SV-1, S				
RICs and Quantitation Reports for all Standards				
d. Raw (QC)Data				
DFTPP	NA	NA	~	
Blank Data	NA	NA	~	
MS/MSD Data (if requested by USEPA Region)	NA	NA	~	
e. Raw GPC Data	NA	NA	~	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

Semivolatile SIM Data [Form I SV-SIM; Form II SV-SIM1 and SV-SIM2; Form III-SV-SIM1 and SV-SIM2 (if required; Form IV SV-SIM; Form VI SV-SIM; Form VII SV-SIM; Form VIII SV-SIM1 and SV-SIM2; and all raw data for QC, Samples, and Standards.]	NA	NA	~	NA
7. Pesticides Data				
a. QC Summary				
Surrogate Recovery Summary (Form II PEST-1 and PEST-2)	NA	NA	~	
Matrix Spike/Matrix Spike Duplicate Recovery Summary (Form III PEST-1 and PEST-2)	NA	NA	~	
Laboratory Control Sample Recovery (Form III PEST-3 and PEST-4)	NA	NA	~	
Method Blank Summary (Form IV PEST)	NA	NA	~	
b. Sample Data	NA	NA		
TCL Results - Organics Analysis Data Sheet (Form I PEST)			~	
Chromatograms (Primary Column)				
Chromatograms from second GC column confirmation				
GC Integration report or data system printout				
Manual work sheets				
For Pesticides by GC/MS				
Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)				
c. Standards Data	NA	NA		
Initial Calibration of Single Component Analytes (Form VI PEST-1 and PEST-2)				
Toxaphene Initial Calibration (Form VI PEST-3 and PEST-4)			~	
Analyte Resolution Summary (Form VI PEST-5, per column)				
Performance Evaluation Mixture (Form VI PEST-6)				
Individual Standard Mixture A (Form VI PEST-7)				
Individual Standard Mixture B (Form VI PEST-8)				
Individual Standard Mixture C (Form VI PEST-9 and PEST-10)				
Calibration Verification Summary (Form VII PEST-1)				
Calibration Verification Summary (Form VII PEST-2)				

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

Calibration Verification Summary (Form VII PEST-3)					NA
Calibration Verification Summary (Form VII PEST-4)					
Analytical Sequence (Form VIII PEST)					
Florisil Cartridge Check (Form IX PEST-1)					
Pesticide GPC Calibration (Form IX PEST-2)					
Identification Summary for Single Component Analytes (Form X PEST-1)					
Identification Summary for Toxaphene Form X PEST-2)					
Chromatograms and data system printouts					
A printout of Retention Times and corresponding peak areas or peak heights					
d. Raw QC Data					
Blank Data	NA	NA	~		
Matrix Spike/Matrix Spike Duplicate Data	NA	NA	~		
Laboratory Control Sample	NA	NA	~		
e. Raw GPC Data	NA	NA	~		
f. Raw Florisil Data	NA	NA	~		
8. Aroclor Data					
a. QC Summary					
Surrogate Recovery Summary (Form II ARO-1 and ARO-2)	12	13	✓	✓	
Matrix Spike/Matrix Spike Duplicate Summary (Form III ARO-1 and ARO-2)	14	15	✓	✓	
Laboratory Control Sample Recovery (Form III ARO-3 and ARO-4)	16	16	✓	✓	
Method Blank Summary (Form IV ARO)	17	17	✓	✓	
b. Sample Data	18	187	✓	✓	
TCL Results - Organics Analysis Data Sheet (Form I ARO)	NA	NA	~	✓	
Chromatograms (Primary Column)	NA	NA	~	✓	
Chromatograms from second GC column confirmation	NA	NA	~	✓	
GC Integration report of data system printout	NA	NA	~	✓	
Manual work sheets	NA	NA	~	✓	
For Aroclors by GC/MS	NA	NA	~	NA	

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

Copies of raw spectra and copies of background-subtracted mass spectra of target compounds (samples & standards)				NA
c. Standards Data	188	397		
Aroclors Initial Calibration (Form VI ARO-1,ARO-2, and ARO-3)			✓	✓
Calibration Verification Summary (Form VII ARO-1)				
Analytical Sequence (Form VIII ARO)				✓
Identification Summary for Multicomponent Analytes (Form X ARO)				✓
Chromatograms and data system printouts				✓
A printout of Retention Times and corresponding peak areas or peak heights				
d. Raw QC Data				
Blank Data	398	448	✓	✓
Matrix Spike/Matrix Spike Duplicate Data	449	456	✓	✓
Laboratory Control Sample (LCS) Data	457	462	✓	✓
e. Raw GPC Data (if performed)	NA	NA	—	NA
9. Miscellaneous Data				
Original preparation and analysis forms or copies of preparation and analysis logbook pages	463	533	✓	✓
Internal sample and sample extract transfer chain-of-custody records	550	551	✓	✓
Screening records	NA	NA	—	✓
All instrument output, including strip charts from screening activities (describe or list)				
10. EPA Shipping/Receiving Documents				
Airbills (No. of shipments 6)	534	539	✓	✓
Chain of Custody Records	540	541	✓	✓
Sample Tags	554	557	✓	✓
Sample Log-in Sheet (Lab & DC-1)	542	549	✓	✓
Miscellaneous Shipping/Receiving Records (describe or list)				

ORGANICS COMPLETE SDG FILE (CSF) INVENTORY SHEET
FORM DC-2

CASE NO : 43392	SDG NO : A4B36	SDG NOs TO FOLLOW : N/A
N/A	N/A	MOD. REF. NO : N/A

11. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)

Sample Transfer	550	551	✓	✓

12. Other Records (describe or list)

Telephone Communication Log	NA	NA	–	
PE Instructions	552	553	✓	✓

13. Comments

Completed by: (CLP Lab)	(Signature)	Nimisha Pandya (Printed Name/Title)	05/09/13 (Date)
Verified by: (CLP Lab)	(Signature)	Himanshu Prajapati (Printed Name/Title)	05/09/13 (Date)
Audited by: ~~(USEPA)~~ Weston	(Signature)	John Burton / Technical Manager (Printed Name/Title)	5/30/13 (Date)

Evidence Audit Photocopy

COPY

HRS Reference #82

RECEIVED
MAY 13 2013
By

Site: Jard Company Inc
TDD: 12-10-0008
TASK: 0850

EPA NEW ENGLAND
COMPLETE SDG FILE
RECEIPT / TRANSFER FORM

Case: 43392 SDG: A4836

Receipt Date	Received By : Name	Init.	Affiliation	CSF Activity	Custody Seals Present / Intact	Released To	Date
05/10/13	Doris Guzman	DG	ESAT	Received for Transfer	(Y) N (Y) N	Weston	05/10/13
5/13/13	B. Mahany	BM	Weston	Storage + validation	(Y) N (Y) N		
5/17/13	J. Burton	JB	Weston	CCS response	(Y) N (Y) N		
5/22/13	J. Burton	JB	Weston	CCS response	(Y) N (Y) N		
					Y N Y N		
					Y N Y N		
					Y N Y N		
					Y N Y N		
					Y N Y N		
					Y N Y N		
					Y N Y N		
					Y N Y N		

EPA-NE - DQO SUMMARY FORM

A separate Form should be completed for each sampling event. Refer to Attachment A for instructions on completing this form, Attachment B for a complete list of the parameter codes and Attachment C for an example of a completed form.

1. EPA Program: TSCA (CERCLA) RCRA DW NPDES CAA
Other:
Projected Date(s) of Sampling Spring (April/May) 2013
EPA Site Manager Martha Bosworth
EPA Case Team Members

Site Name Jard Company Inc
Site Location Bennington, Vermont
Assigned Site Latitude/Longitude 42° 53′ 21.5″ north/73° 11′ 21.9″ west
CERCLA Site/Spill Identifier No VTD048141741 (Include Operable Unit)
Phase: ERA SA/SI pre-RI RI (phase I, etc.) FS RD RA post-RA
(circle one) Other: Site Reassessment

2. QAPP Title and Revision Date Site Assessment Program Site Specific Quality Assurance Project Plan for Surface and Subsurface Soil/Source, Ground Water, and Sediment Sampling Jard Company Inc, Bennington, Vermont dated 11 January 2013
Approved by: Martha Bosworth Date of Approval: TBD
Title of Approving Official: Site Assessment Manager Organization*: EPA
*If other than EPA, record date approval authority was delegated:

EPA Oversight Project (circle one) Y (N) Type of EPA Oversight (circle one) PRP or FF Other:
Confirmatory Analysis for Field Screening (Y) N If EPA Oversight or Confirmatory: % splits TBD
Are comparability criteria documented? Y N

3. a.	Matrix Code[1]	SO	SO	SO	GW	GW	SD	SD	SD
b.	Parameter Code[2]	PCB Aroclors	PCB Aroclors	PCB Congeners	PCB Aroclors	PCB Congeners	PCB Aroclors	PCB Aroclors	PCB Congeners
c.	Preservation Code[3]	5	5	5	5	5	5	5	5
d.	Analytical Services Mechanism	DAS or CLP	DAS or CLP	CLP	DAS or CLP	DAS or CLP	DAS or CLP	DAS or CLP	CLP
e.	No. of Sample Locations	65	28	2	21	2	60	60	60
	Field QC:								
f.	Field Duplicate Pairs	4	2		2	5	5	5	5
g.	Equipment Blanks	See RB	See RB	See RB	See RB	See RB	See RB	See RB	See RB
h.	VOA Trip Blanks	0	0	0	0	0	0	0	0
i.	Cooler Temperature Blanks	1 per cooler	1 per cooler	1 per cooler	1 per cooler	1 per cooler	1 per cooler	1 per cooler	1 per cooler
j.	Bottle Blanks	0	0	0	0	0	0	0	0
k.	Other:								
l.	PES sent to Laboratory	NA	6	TBD	3	TBD	NA	3	TBD
	Laboratory QC:								
m.	Reagent Blank	0	0	0	0	0	0	0	0
n.	Duplicate	0	0	0	0	0	0	0	0
o.	Matrix Spike	0	2	0	1	0	1	0	0
p.	Matrix Spike Duplicate	0	2	0	1	0	1	0	0
q.	Other:								

4. Site Information
Site Dimensions Approximately 11.26 acres
List all potentially contaminated matrices Surface and subsurface soil, sediment, ground water, and residential surface soil
Range of Depth to Groundwater greater than 5 feet
Soil Types: Surface Subsurface Other:
Sediment Types: Stream Pond Estuary Wetland Other: Expected Soil/Sediment Moisture Content: High Low

1. EPA Program: TSCA (CERCLA) RCRA DW NPDES CAA
Other:
Projected Date(s) of Sampling Spring (April/May) 2013
EPA Site Manager Martha Bosworth
EPA Case Team Members

Site Name Jard Company Inc
Site Location Bennington, Vermont
Assigned Site Latitude/Longitude 42° 53′ 21.5″ north/73° 11′ 21.9″ west
CERCLA Site/Spill Identifier No VTD048141741 (Include Operable Unit)
Phase: ERA SA/SI pre-RI RI (phase I, etc.) FS RD RA post-RA
(circle one) (Other: Site Reassessment)

2. QAPP Title and Revision Date Site Assessment Program Site Specific Quality Assurance Project Plan for Surface and Subsurface Soil/Source, Ground Water, and Sediment Sampling Jard Company Inc, Bennington, Vermont dated 11 January 2013
Approved by: Martha Bosworth Date of Approval: TBD
Title of Approving Official: Site Assessment Manager Organization*: EPA
*If other than EPA, record date approval authority was delegated:

EPA Oversight Project (circle one) Y (N) Type of EPA Oversight (circle one) PRP or FF Other:
Confirmatory Analysis for Field Screening (Y) N If EPA Oversight or Confirmatory: % splits TBD
Are comparability criteria documented? Y N

3.									
a.	Matrix Code[1]	SS	SS	SS	RB				
b.	Parameter Code[2]	PCB Aroclors	PCB Aroclors	PCB Congeners	PCB Aroclors				
c.	Preservation Code[3]	5	5	5	5				
d.	Analytical Services Mechanism	DAS or CLP	DAS or CLP	CLP	CLP Non-RAS				
e.	No. of Sample Locations	125	38	2	21				
	Field QC:								
f.	Field Duplicate Pairs	7	2		0				
g.	Equipment Blanks	See RB	See RB	See RB	0				
h.	VOA Trip Blanks	0	0	0	0				
i.	Cooler Temperature Blanks	1 per cooler	1 per cooler	1 per cooler	1 per cooler				
j.	Bottle Blanks	0	0	0	0				
k.	Other:								
l.	PES sent to Laboratory	NA	6	TBD	0				
	Laboratory QC:								
m.	Reagent Blank	0	0	0	0				
n.	Duplicate	0	0	0	0				
o.	Matrix Spike	0	2	0	0				
p.	Matrix Spike Duplicate	0	2	0					
q.	Other:								

4. Site Information
Site Dimensions Approximately 11.26 acres
List all potentially contaminated matrices Surface and subsurface soil, sediment, ground water, and residential surface soil
Range of Depth to Groundwater greater than 5 feet
Soil Types: (Surface) (Subsurface) Other:
Sediment Types: Stream Pond Estuary Wetland Other: Expected Soil/Sediment Moisture Content: (High) Low

When multiple matrices will be sampled during a sampling event, complete Sections 5-10 for each matrix. Matrix Code[1] SO

5. Data Use (circle all that apply) Site Investigation/Assessment PRP Determination Removal Actions
Nature and Extent of Contamination Human and/or Ecological Risk Assessment Remediation Alternatives
Engineering Design Remedial Action
Post-Remedial Action (quarterly monitoring) Other:

Draft DQO Summary Form 11/96

6. Summarize DQOs: Collect surface and subsurface soil/source samples from the identified source area (capped former building footprint and excavated staged material) on the property for PCB Aroclors field screening and fixed based laboratory analysis in source areas on the Jard Company Inc property. A subset of samples will be submitted for fixed laboratory analysis with a smaller subset submitted for PCB Congener analysis.

Complete Table if applicable

COCs	Action Levels	Analytical Method-Quantitation Limits
PCB Aroclors (Field Screening)	Above Background (Assumed to be ND)	0.2 mg/Kg
PCB Aroclors (Fixed Lab)	Above Background (Assumed to be ND)	33 ug/kg
PCB Congerners	Above Background (Assumed to be ND)	20 to 100 ng/Kg

7. Sampling Method (circle technique) Bailer Low flow pump (Region I method: Yes No) Peristaltic Pump
Positive Displacement Pump Faucet or Spigot Other:
Split Spoon Dredge Trowel (Other: Direct sampling)

Sampling Procedures (SOP name, No., Rev. #, and date)
List Background Sample Locations NA for source samples
Circle: (Grab) or Composite
"Hot spots" sampled: (Yes) No

8. Field Data (circle) ORP pH Specific Conductance Dissolved O_2 Temperature Turbidity
Other:

9. Analytical Methods and Parameters

Method title/SOP name	Method/SOP Identification number	Revision Date	Target Parameters (VOA, SV, Pest/PCB, Metals, etc.)
PCB Aroclors (Field Screening)	EIA-FLDPCB2.SOP		PCBs
PCB Aroclors	SOM01.2 or DAS Equivalent		PCBs
PCB Congeners	CBC01.0		PCB Congeners

10. Validation Criteria (circle one) 1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, III or IV
2. Other Approved Validation Criteria:
Validation Tier (circle one) I (II) III Partial Tier III:
Company/Organization Performing Data Validation Weston Solutions, Inc./START III (Prime) or Subcontractor (circle one)

11. Company Name Weston Solutions, Inc. Contract Number EP-W-05-042
Contract Name (e.g. START, RACS, etc.) START III Work Assignment No. 20114-081-998-0850
Person Completing Form/Title G. Hornok/Lead Project Scientist Date of DQO Summary Form Completion 11 January 2013

When multiple matrices will be sampled during a sampling event, complete Sections 5-10 for each matrix. Matrix Code[1] GW

5. Data Use (circle all that apply) Site Investigation/Assessment PRP Determination Removal Actions
Nature and Extent of Contamination Human and/or Ecological Risk Assessment Remediation Alternatives
Engineering Design Remedial Action
Post-Remedial Action (quarterly monitoring) Other:

Draft DQO Summary Form 11/96

6. Summarize DQOs: Collect ground water samples from ground water monitoring wells previously installed on and off the property for PCB Aroclors fixed based laboratory analysis. A subset of samples will be submitted for PCB Congener analysis.

Complete Table if applicable

COCs	Action Levels	Analytical Method-Quantitation Limits
PCB Aroclors (Fixed Lab)	Above Background (Assumed to be ND)	1.0 µg/L
PCB Congeners	Above Background (Assumed to be ND)	100 to 1,000 pg/L

7. Sampling Method (circle technique) Bailer Low flow pump (Region I method: Yes No) Peristaltic Pump
Positive Displacement Pump Faucet or Spigot Other:
Split Spoon Dredge Trowel Other:

Sampling Procedures (SOP name, No., Rev. #, and date)
List Background Sample Locations Ground Water monitoring wells TBD
Circle: Grab or Composite
"Hot spots" sampled: Yes No

8. Field Data (circle) ORP pH Specific Conductance Dissolved O_2 Temperature Turbidity
Other:

9. Analytical Methods and Parameters

Method title/SOP name	Method/SOP Identification number	Revision Date	Target Parameters (VOA, SV, Pest/PCB, Metals, etc.)
PCB Aroclors	SOM01.2 or DAS Equivalent		PCBs
PCB Congeners	CBC01.0		PCB Congeners

10. Validation Criteria (circle one) 1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, III or IV
2. Other Approved Validation Criteria:
Validation Tier (circle one) I II III Partial Tier III:
Company/Organization Performing Data Validation Weston Solutions, Inc./START III (Prime or Subcontractor (circle one)

11. Company Name Weston Solutions, Inc. Contract Number EP-W-05-042
Contract Name (e.g. START, RACS, etc.) START III Work Assignment No. 20114-081-998-0850
Person Completing Form/Title G. Hornok/Lead Project Scientist Date of DQO Summary Form Completion 11 January 2013

When multiple matrices will be sampled during a sampling event, complete Sections 5-10 for each matrix. Matrix Code[1] SD

5. Data Use (circle all that apply) Site Investigation/Assessment PRP Determination Removal Actions
Nature and Extent of Contamination Human and/or Ecological Risk Assessment Remediation Alternatives
Engineering Design Remedial Action
Post-Remedial Action (quarterly monitoring) Other:

Draft DQO Summary Form 11/96

6. Summarize DQOs: Collect sediment samples from a wetland located west of Park Street for PCB Aroclors field screening and fixed based laboratory analysis. A subset of samples will be submitted for fixed laboratory analysis with a smaller subset submitted for PCB Congener analysis.

Complete Table if applicable

COCs	Action Levels	Analytical Method-Quantitation Limits
PCB Aroclors (Field Screening)	Above Background (Assumed to be ND)	0.2 mg/Kg
PCB Aroclors (Fixed Lab)	Above Background (Assumed to be ND)	33 ug/kg
PCB Congerners	Above Background (Assumed to be ND)	20 to 100 ng/Kg

7. Sampling Method (circle technique) Bailer Low flow pump (Region I method: Yes No) Peristaltic Pump
Positive Displacement Pump Faucet or Spigot Other:
Split Spoon Dredge Trowel (Other:) Direct sampling

Sampling Procedures (SOP name, No., Rev. #, and date)
List Background Sample Locations Wetalnd area northeast of the Jard Company Inc property
Circle: Grab or Composite
"Hot spots" sampled: Yes No

8. Field Data (circle) ORP pH Specific Conductance Dissolved O_2 Temperature Turbidity
Other:

9. Analytical Methods and Parameters

Method title/SOP name	Method/SOP Identification number	Revision Date	Target Parameters (VOA, SV, Pest/PCB, Metals, etc.)
PCB Aroclors (Field Screening)	SOM01.2		PCBs
PCB Aroclors	SOM01.2 or DAS Equivalent		PCBs
Total Metals (including Hg)	CBC01.0		PCB Congeners

10. Validation Criteria (circle one) 1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, III or IV
2. Other Approved Validation Criteria:
Validation Tier (circle one) I (II) III Partial Tier III:
Company/Organization Performing Data Validation Weston Solutions, Inc./START III (Prime) or Subcontractor (circle one)

11. Company Name Weston Solutions, Inc. Contract Number EP-W-05-042
Contract Name (e.g. START, RACS, etc.) START III Work Assignment No. 20114-081-998-0850
Person Completing Form/Title G. Hornok/Lead Project Scientist Date of DQO Summary Form Completion 11 January 2013

When multiple matrices will be sampled during a sampling event, complete Sections 5-10 for each matrix. Matrix Code[1] SS

5. Data Use (circle all that apply) Site Investigation/Assessment PRP Determination Removal Actions
Nature and Extent of Contamination Human and/or Ecological Risk Assessment Remediation Alternatives
Engineering Design Remedial Action
Post-Remedial Action (quarterly monitoring) Other:

Draft DQO Summary Form 11/96

6. Summarize DQOs: Collect surface soil samples from residential properties downgradient of the Jard Companry Inc property and within 200 feet of the residences for PCB Aroclors field screening and fixed based laboratory analysis in source areas on the Jard Company Inc property. A subset of samples will be submitted for fixed laboratory analysis with a smaller subset submitted for PCB Congener analysis.

Complete Table if applicable

COCs	Action Levels	Analytical Method-Quantitation Limits
PCB Aroclors (Field Screening)	Above Background (Assumed to be ND)	0.2 mg/Kg
PCB Aroclors (Fixed Lab)	Above Background (Assumed to be ND)	33 ug/kg
PCB Congerners	Above Background (Assumed to be ND)	20 to 100 ng/Kg

7. Sampling Method (circle technique) Bailer Low flow pump (Region I method: Yes No) Peristaltic Pump
Positive Displacement Pump Faucet or Spigot Other:
Split Spoon Dredge Trowel Other: Direct sampling

Sampling Procedures (SOP name, No., Rev. #, and date)
List Background Sample Locations Residential properties located north of the Jard Company Inc property
Circle: Grab or Composite
"Hot spots" sampled: Yes No

8. Field Data (circle) ORP pH Specific Conductance Dissolved O_2 Temperature Turbidity
Other:

9. Analytical Methods and Parameters

Method title/SOP name	Method/SOP Identification number	Revision Date	Target Parameters (VOA, SV, Pest/PCB, Metals, etc.)
PCB Aroclors (Field Screening)	SOM01.2		PCBs
PCB Aroclors	SOM01.2 or DAS Equivalent		PCBs
Total Metals (including Hg)	CBC01.0		PCB Congeners

10. Validation Criteria (circle one) 1. Region I, EPA-NE Data Validation Functional Guidelines for Evaluating Environmental Analyses, Part II, III or IV
2. Other Approved Validation Criteria:
Validation Tier (circle one) I II III Partial Tier III:
Company/Organization Performing Data Validation Weston Solutions, Inc./START III (Prime or Subcontractor (circle one)

11. Company Name Weston Solutions, Inc. Contract Number EP-W-05-042
Contract Name (e.g. START, RACS, etc.) START III Work Assignment No. 20114-081-998-0850
Person Completing Form/Title G. Hornok/Lead Project Scientist Date of DQO Summary Form Completion 11 January 2013

Matrix Codes[1] - Refer to Attachment B, Part I
Parameter Codes[2] - Refer to Attachment B, Part II

Preservation Codes[3]

1. HCl to pH ≤ 2
2. HNO_3
3. $NaHSO_4$
4. H_2SO_4
5. Cool @ 4C (± 2)
6. NaOH
7. $K_2Cr_2O_7$
8. Freeze
9. Room Temperature (avoid excessive heat)
10. Other (Specify)
N. Not preserved

* - To supplement Matrix Codes and/or Parameter Codes contact the QA Unit

Attachment C

Original Analytical Results (Form I's)
Case No. 43392; SDG No. A4B36

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B36

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-04

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004965.D

% Moisture: 13 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.30 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	350	
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
37324-23-5	Aroclor-1262	38	U
11100-14-4	Aroclor-1268	38	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B37

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-05

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004929.D

% Moisture: 17 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.05 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	170	
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B38

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-06

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004935.D

% Moisture: 27 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.04 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	250	
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B39

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005129.D

% Moisture: 22 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.09 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	770	E
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B39DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-15DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005130.D

% Moisture: 22 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.09 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	420	U
11104-28-2	Aroclor-1221	420	U
11141-16-5	Aroclor-1232	420	U
53469-21-9	Aroclor-1242	1100	D
12672-29-6	Aroclor-1248	420	U
11097-69-1	Aroclor-1254	420	U
11096-82-5	Aroclor-1260	420	U
37324-23-5	Aroclor-1262	420	U
11100-14-4	Aroclor-1268	420	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B40

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-16

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005004.D

% Moisture: 19 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.21 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	1000	
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B40DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-16DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005005.D

% Moisture: 19 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup:(Y/N) N pH: 7.21 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	1200	D
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B41

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005006.D

% Moisture: 32 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.05 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	720	P
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B41DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-17DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005007.D

% Moisture: 32 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.05 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	490	U
11104-28-2	Aroclor-1221	490	U
11141-16-5	Aroclor-1232	490	U
53469-21-9	Aroclor-1242	630	DP
12672-29-6	Aroclor-1248	490	U
11097-69-1	Aroclor-1254	490	U
11096-82-5	Aroclor-1260	490	U
37324-23-5	Aroclor-1262	490	U
11100-14-4	Aroclor-1268	490	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B42

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005008.D

% Moisture: 12 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 6.86 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	1100	E
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U
37324-23-5	Aroclor-1262	37	U
11100-14-4	Aroclor-1268	37	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B42DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-18DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005002.D

% Moisture: 12 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 6.86 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	700	DP
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	370	U
11096-82-5	Aroclor-1260	370	U
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B43

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-07

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004936.D

% Moisture: 14 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 6.70 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	110	
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
37324-23-5	Aroclor-1262	38	U
11100-14-4	Aroclor-1268	38	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B44

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-01

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004963.D

% Moisture: 17 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.02 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	1100	E
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B44DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-01DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004964.D

% Moisture: 17 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup:(Y/N) N pH: 7.02 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	1200	D
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B45

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-19

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005010.D

% Moisture: 9.2 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.17 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	900	EP
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B45DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-19DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005011.D

% Moisture: 9.2 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.17 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	1100	D
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	360	U
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B46

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-20

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005012.D

% Moisture: 17 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.27 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	1300	E
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B46DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-20DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005013.D

% Moisture: 17 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.27 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	2000	D
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	390	U
37324-23-5	Aroclor-1262	390	U
11100-14-4	Aroclor-1268	390	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B47

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-21

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005014.D

% Moisture: 7.3 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.66 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	790	P
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B47DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-21DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005015.D

% Moisture: 7.3 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.66 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	1000	DP
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	360	U
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B48

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-22

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005016.D

% Moisture: 8.3 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/27/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 8.45 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	36	U
11104-28-2	Aroclor-1221	36	U
11141-16-5	Aroclor-1232	36	U
53469-21-9	Aroclor-1242	1400	E
12672-29-6	Aroclor-1248	36	U
11097-69-1	Aroclor-1254	36	U
11096-82-5	Aroclor-1260	36	U
37324-23-5	Aroclor-1262	36	U
11100-14-4	Aroclor-1268	36	U

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AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B48DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-22DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005017.D

% Moisture: 8.3 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/27/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 8.45 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	1800	D
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	360	U
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B49

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004969.D

% Moisture: 10 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.88 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	37	U
11104-28-2	Aroclor-1221	37	U
11141-16-5	Aroclor-1232	37	U
53469-21-9	Aroclor-1242	840	
12672-29-6	Aroclor-1248	37	U
11097-69-1	Aroclor-1254	37	U
11096-82-5	Aroclor-1260	37	U
37324-23-5	Aroclor-1262	37	U
11100-14-4	Aroclor-1268	37	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B49DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-10DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004970.D

% Moisture: 10 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup:(Y/N) N pH: 7.88 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	180	U
11104-28-2	Aroclor-1221	180	U
11141-16-5	Aroclor-1232	180	U
53469-21-9	Aroclor-1242	1100	D
12672-29-6	Aroclor-1248	180	U
11097-69-1	Aroclor-1254	180	U
11096-82-5	Aroclor-1260	180	U
37324-23-5	Aroclor-1262	180	U
11100-14-4	Aroclor-1268	180	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B50

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004971.D

% Moisture: 16 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.28 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	2600	E
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B50DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-11DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004972.D

% Moisture: 16 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 7.28 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	3500	D
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	390	U
37324-23-5	Aroclor-1262	390	U
11100-14-4	Aroclor-1268	390	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B51

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004973.D

% Moisture: 13 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 7.29 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	38	U
11104-28-2	Aroclor-1221	38	U
11141-16-5	Aroclor-1232	38	U
53469-21-9	Aroclor-1242	6300	E
12672-29-6	Aroclor-1248	38	U
11097-69-1	Aroclor-1254	38	U
11096-82-5	Aroclor-1260	38	U
37324-23-5	Aroclor-1262	38	U
11100-14-4	Aroclor-1268	38	U

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AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B51DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-12DL

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004997.D

% Moisture: 13 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 100.0

GPC Cleanup:(Y/N) N pH: 7.29 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	3800	U
11104-28-2	Aroclor-1221	3800	U
11141-16-5	Aroclor-1232	3800	U
53469-21-9	Aroclor-1242	7300	D
12672-29-6	Aroclor-1248	3800	U
11097-69-1	Aroclor-1254	3800	U
11096-82-5	Aroclor-1260	3800	U
37324-23-5	Aroclor-1262	3800	U
11100-14-4	Aroclor-1268	3800	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B52

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-13

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB004998.D

% Moisture: 23 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: 6.29 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	27000	E
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B52DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-13DL

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PB005127.D

% Moisture: 23 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 500.0

GPC Cleanup:(Y/N) N pH: 6.29 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	21000	U
11104-28-2	Aroclor-1221	21000	U
11141-16-5	Aroclor-1232	21000	U
53469-21-9	Aroclor-1242	160000	D
12672-29-6	Aroclor-1248	21000	U
11097-69-1	Aroclor-1254	21000	U
11096-82-5	Aroclor-1260	21000	U
37324-23-5	Aroclor-1262	21000	U
11100-14-4	Aroclor-1268	21000	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B53

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-14

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005000.D

% Moisture: 9.5 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: 8.10 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	280000	E
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	360	U
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B53DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-14DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005128.D

% Moisture: 9.5 Decanted:(Y/N) N Date Received: 04/19/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 500.0

GPC Cleanup:(Y/N) N pH: 8.10 Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	18000	U
11104-28-2	Aroclor-1221	18000	U
11141-16-5	Aroclor-1232	18000	U
53469-21-9	Aroclor-1242	180000	D
12672-29-6	Aroclor-1248	18000	U
11097-69-1	Aroclor-1254	18000	U
11096-82-5	Aroclor-1260	18000	U
37324-23-5	Aroclor-1262	18000	U
11100-14-4	Aroclor-1268	18000	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B55

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-08

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004937.D

% Moisture: 0.0 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: N/A Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	730	E
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	33	U
11096-82-5	Aroclor-1260	33	U
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B55DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-08DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB005118.D

% Moisture: 0.0 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 05/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup:(Y/N) N pH: N/A Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	870	D
12672-29-6	Aroclor-1248	160	U
11097-69-1	Aroclor-1254	160	U
11096-82-5	Aroclor-1260	160	U
37324-23-5	Aroclor-1262	160	U
11100-14-4	Aroclor-1268	160	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B58

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-09

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004967.D

% Moisture: 0.0 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup:(Y/N) N pH: N/A Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	33	U
11104-28-2	Aroclor-1221	33	U
11141-16-5	Aroclor-1232	33	U
53469-21-9	Aroclor-1242	33	U
12672-29-6	Aroclor-1248	33	U
11097-69-1	Aroclor-1254	700	E
11096-82-5	Aroclor-1260	33	U
37324-23-5	Aroclor-1262	33	U
11100-14-4	Aroclor-1268	33	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

A4B58DL

Lab Name: Chemtech Contract: EPW11030

Lab Code: CHEM Case No.: 43392 Mod. Ref No.: SDG No.: A4B36

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: E1903-09DL

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PB004968.D

% Moisture: 0.0 Decanted:(Y/N) N Date Received: 04/18/2013

Extraction:(Type) SOXH Date Extracted: 04/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 04/26/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup:(Y/N) N pH: N/A Sulfur Cleanup:(Y/N) N

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/Kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	330	U
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	1600	D
11096-82-5	Aroclor-1260	330	U
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

Attachment D

USEPA Contract Laboratory Program Statement of Work for Organic Analysis,
Multi-Media Multi-Concentration, SOMO1.2 (Excerpt)
and
Modifications Updating SOM01.1 to SOM01.2, October 5, 2006, Updated 02-12-2007,
Amended 04-11-2007 (Excerpt)

4.0 AROCLORS TARGET COMPOUND LIST AND CONTRACT REQUIRED QUANTITATION LIMITS[1]

Aroclors	CAS Number	Quantitation Limits	
		Water	Soil
		ug/L	ug/kg
141. Aroclor-1016	12674-11-2	1.0	33
142. Aroclor-1221	11104-28-2	1.0	33
143. Aroclor-1232	11141-16-5	1.0	33
144. Aroclor-1242	53469-21-9	1.0	33
145. Aroclor-1248	12672-29-6	1.0	33
146. Aroclor-1254	11097-69-1	1.0	33
147. Aroclor-1260	11096-82-5	1.0	33
148. Aroclor-1262	37324-23-5	1.0	33
149. Aroclor-1268	11100-14-4	1.0	33

[1]There is no differentiation between the preparation of low and medium soil samples in this method for the analysis of Aroclors.

EXHIBIT D – AROCLORS	
EXHIBIT/SECTION(S)	**MODIFICATION (S)**
Aro-Item 1 Exhibit D - Aroclor: Section 7.2.3.4.1	The following Section: "Prepare five-point initial calibration standard solutions containing a mixture of Aroclors 1016 and 1260 at the following suggested levels: 100; 200; 400; 800; and 1600 ng/mL and surrogates at 5.0, 10, 20, 40 and 80 ng/mL for tetrachloro-m-xylene and 10, 20, 40, 80 and 160 ng/mL for decachlorobiphenyl. Also, prepare a single-point initial calibration standard solution containing Aroclors 1221, 1232, 1242, 1248, 1254, 1262, and 1268 at 400 ng/mL and surrogates at 20 ng/mL for tetrachloro-m-xylene and 40 ng/mL for decachlorobiphenyl. The solutions must be prepared every 6 months, or sooner if the solutions have degraded or concentrated." Is updated to: "Prepare five-point initial calibration standard solutions containing a mixture of Aroclors 1016 and 1260 at the following suggested levels: 100; 200; 400; 800; and 1600 ng/mL and surrogates at 5.0, 10, 20, 40 and 80 ng/mL for tetrachloro-m-xylene and 10, 20, 40, 80 and 160 ng/mL for decachlorobiphenyl. ***In addition, prepare a single-point initial calibration standard solution containing Aroclors 1221 at 400 ng/mL including surrogates, tetrachloro-m-xylene at 20 ng/mL and decachlorobiphenyl at 40 ng/mL. Also, prepare a single point calibration initial calibration standard of Aroclor 1232, 1242, 1248, 1254, 1262, and 1268 as instructed for Aroclor 1221.*** **Refer to Section 7.2.3.4.3 for five-point calibration standards of the other Aroclors.** The solutions must be prepared every 6 months, or sooner if the solutions have degraded or concentrated."
Aro-Item 2 Exhibit D - Aroclor: Section 7.2.3.4.2	The following Section: "Prepare a single-point calibration verification standard solution containing Aroclor 1260 and Aroclor 1016 at 400 ng/mL and surrogates at 20 ng/mL for tetrachloro-m-xylene and 40 ng/mL for decachlorobiphenyl. The solution must be prepared every 6 months, or sooner if the solution has degraded or concentrated." Is updated to: "Prepare a single-point calibration verification standard solution containing Aroclor 1260 and Aroclor 1016 at 400 ng/mL and surrogates, ***tetrachloro-m-xylene at 20 ng/mL and decachlorobiphenyl 40 ng/mL.*** **Additional *individual* calibration verification standard *solution(s)* containing any other Aroclor may be prepared when necessary at 400 ng/mL,** ***including surrogates, tetrachloro-m-xylene at 20 ng/mL and decachlorobiphenyl at 40 ng/mL.*** The solution must be prepared every 6 months, or sooner if the solution has degraded or concentrated."

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 3 Exhibit D - Aroclor: Section 9.2.1	The following Section: "Summary of Initial Calibration Prior to sample analysis (including LCSs and MS/MSDs) and required blanks (method/sulfur cleanup/instrument), each GC/ECD system must be initially calibrated to determine instrument sensitivity and the linearity of Aroclor response. An initial five-point calibration is performed using Aroclors 1016 and 1260 to demonstrate the linearity of the detector response. The other seven Aroclors are calibrated at a single mid-point for pattern recognition. The standards for these seven Aroclors should be analyzed before the analysis of any samples, and may be analyzed before or after the analysis of the five levels of the Aroclor 1016/1260 standards. is updated to: Summary of Initial Calibration Prior to sample analysis (including LCSs and MS/MSDs) and required blanks (method/sulfur cleanup/instrument), each GC/ECD system must be initially calibrated to determine instrument sensitivity and the linearity of Aroclor response. An initial five-point calibration is performed using Aroclors 1016 and 1260 to demonstrate the linearity of the detector response. The other seven Aroclors can be calibrated at a single mid-point **at a minimum**, for pattern recognition. The standards for these seven Aroclors should be analyzed before the analysis of any samples, and may be analyzed before or after the analysis of the five levels of the Aroclor 1016/1260 standards. **Note: All Aroclor target compounds may have five-point calibrations performed initially, prior to sample analyses. Alternately, as long as a valid five-point calibration of Aroclor 1016/1260 is present, five-point calibrations for any of the remaining Aroclor target compounds may be performed, prior to sample analyses.**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 4 Exhibit D - Aroclor: Section 9.2.2	The following Section: Each GC/ECD system must be initially calibrated upon award of the contract, whenever major instrument maintenance or modification is performed (e.g., column replacement or repair, cleaning or replacement of the ECD, etc.), or if the calibration verification technical acceptance criteria have not been met. Also, for any sample in which an Aroclor, other than Aroclor 1016 or Aroclor 1260 is detected, results for the specific Aroclor(s) may only be reported if the Aroclor(s) have been calibrated using multipoint standards (five-point). If time remains in the 12-hour period after a valid five-point initial calibration for a detected Aroclor(s) has been performed, then samples containing the Aroclor(s) may be analyzed. If the previously-analyzed five-point initial calibration containing the Aroclor(s) detected in the sample(s) is not in the same 12-hour sequence, then the sample(s) must be analyzed after a Continuing Calibration Verification (CCV) analysis containing the Aroclor(s) detected in the sample(s) that meets the criteria for CCVs in Section 9.3. is updated to: Each GC/ECD system must be initially calibrated upon award of the contract, whenever major instrument maintenance or modification is performed (e.g., column replacement or repair, cleaning or replacement of the ECD, etc.), or if the calibration verification technical acceptance criteria have not been met. Also, for any sample, in which an Aroclor (other than Aroclor 1016 or Aroclor 1260) is detected, **for which a valid five point calibration curve is not available, results for these specific Aroclors must be reported as an estimated concentration with the appropriate compound qualifier. Subsequently, the sample must be re-analyzed following a valid five point calibration of the specific Aroclor. All sample analysis, must be preceded by an opening CCV with an Aroclor 1016/1260 CS3 standard, at a minimum. Additional Aroclor opening CCV standards may be analyzed at the laboratory's discretion. The closing CCV must include Aroclor 1016/1260 CS3 and all detected Aroclors in the sample. When an Aroclor, other than Aroclor 1016/1260, is detected in a sample, the closing CCV CS3 standard of this detected Aroclor standard must meet opening CCV technical acceptance criteria in Section 9.3.5, if the sample was not preceded by the Aroclor included as a CS3 standard in the opening CCV."**
Aro-Item 5 Exhibit D – Aroclor: Section 9.2.3.3	The following Section: "If Aroclors other than Aroclor 1016/1260 are detected in an analysis, a separate five point calibration must be prepared (Section 7.2.3.4.3) and run for that particular Aroclor." is updated to: "If Aroclors other than Aroclor 1016/1260 are detected in **a sample** analysis, **following a single-point calibration for that particular Aroclor,** a separate five-point calibration must be prepared (Section 7.2.3.4.3) and run for that particular Aroclor, **followed by a re-analysis of the sample."**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 6 Exhibit D – Aroclor; Section 9.2.3.5	Analyze the initial calibration sequence as given below. Initial Calibration Sequence 1. Aroclor 1221 CS3 (400 ng/mL) 2. Aroclor 1232 CS3 (400 ng/mL) 3. Aroclor 1242 CS3 (400 ng/mL) 4. Aroclor 1248 CS3 (400 ng/mL) 5. Aroclor 1254 CS3 (400 ng/mL) 6. Aroclor 1262 CS3 (400 ng/mL) 7. Aroclor 1268 CS3 (400 ng/mL) 8. Aroclor 1016/1260 CS1 (100 ng/mL) 9. Aroclor 1016/1260 CS2 (200 ng/mL) 10. Aroclor 1016/1260 CS3 (400 ng/mL) 11. Aroclor 1016/1260 CS4 (800 ng/mL) 12. Aroclor 1016/1260 CS5 (1600 ng/mL) 13. Instrument blank **Note**: The single-point Aroclor standards may be analyzed after the analysis of the five levels of the Aroclor 1016/1260 standards. The steps pertaining to the instrument blank are used as part of the calibration verification as well. is updated to: **"Initial Calibration may be performed by any of the following sequence Options given below:** Initial Calibration Sequence – **Option 1** 1. Aroclor 1221 CS3 (400 ng/mL) 2. Aroclor 1232 CS3 (400 ng/mL) 3. Aroclor 1242 CS3 (400 ng/mL) 4. Aroclor 1248 CS3 (400 ng/mL) 5. Aroclor 1254 CS3 (400 ng/mL) 6. Aroclor 1262 CS3 (400 ng/mL) 7. Aroclor 1268 CS3 (400 ng/mL) 8. Aroclor 1016/1260 CS1 (100 ng/mL) 9. Aroclor 1016/1260 CS2 (200 ng/mL) 10. Aroclor 1016/1260 CS3 (400 ng/mL) 11. Aroclor 1016/1260 CS4 (800 ng/mL) 12. Aroclor 1016/1260 CS5 (1600 ng/mL) **Note: The single-point Aroclor standards may be analyzed after the analysis of the five levels of the Aroclor 1016/1260 standards in Option 1 above.** **OR**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 6 Exhibit D – Aroclor: Section 9.2.3.5 *(Cont.)*	<u>Initial Calibration Sequence - Option 2</u> **5-points of Aroclor 1016/1260(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1221 (100ng/mL to 1600ng/mL)** **5-points of Aroclor 1232(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1242(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1248(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1254(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1262(100ng/mL to 1600ng/mL)** **5-points of Aroclor 1268(100ng/mL to 1600ng/mL)** **OR** <u>Initial Calibration Sequence - Option 3</u> **5-points of Aroclor 1016/1260(100ng/mL to 1600ng/mL)** **5-points or single point Aroclor 1221 (100ng/mL - 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1232 (100ng/mL - 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1242 (100ng/mL - 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1248 (100ng/mL - 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1254 (100ng/mL - 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1262 (100ng/mL- 1600ng/mL or 400ng/mL)** **5-points or single point Aroclor 1268 (100ng/mL - 1600ng/mL or 400ng/mL)** **Note: Option 2 and 3 Initial Calibration above may be performed in any Aroclor sequence as long as a valid five-point calibration of Aroclor 1016/1260 is present. Refer to Section 7.2.3.4 for initial calibration standard concentrations.**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 7 Exhibit D – Aroclor: Section 9.2.4.2	The following Section: "For Aroclors 1016 and 1260, an RT is measured for a minimum of 3 peaks in each of the five calibration standards and the mean RT ($\overline{RT}$) is calculated for each of the peaks as the average of the five values obtained from the five calibration standards. For Aroclors 1221, 1232, 1242, 1248, 1254, 1262, and 1268 an RT is measured for each of the peaks for a single-point calibration standard. If a valid five-point calibration is present for a specific Aroclor then an RT is measured for each of the peaks in each of the five calibration standards and the $\overline{RT}$ is calculated as the average of the five values for each of the peaks obtained from the five calibration standards. An RT is measured for the surrogates in each of the five calibration standards and the $\overline{RT}$ is calculated as the average of the five values. Calculate the $\overline{RT}$ using Equation 1: is updated to: "For Aroclors 1016 and 1260, an RT is measured for a minimum of 3 peaks in each of the five calibration standards and the mean RT ($\overline{RT}$) is calculated for each of the peaks as the average of the five values obtained from the five calibration standards. For Aroclors 1221, 1232, 1242, 1248, 1254, 1262, and 1268 an RT is measured for **a minimum of three** peaks for a single-point calibration standard. If a valid five-point calibration is present for a specific Aroclor then an RT is measured for **a minimum of three** peaks in each of the five calibration standards and the $\overline{RT}$ is calculated as the average of the five values for each of the peaks obtained from the five calibration standards. An RT is measured for the surrogates in each of the five calibration standards of **Aroclor 1016/1260, or from Aroclor 1016 if analyzed as a separate mixture. The surrogate** $\overline{RT}$ **is** calculated as the average of the five values. Calculate the $\overline{RT}$ using Equation 1:"

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 8 Exhibit D – Aroclor: Section 9.2.4.4	The following Section: "The linearity of the instrument is determined by calculating a Percent Relative Standard Deviation (%RSD) of the Calibration Factors (CFs). Either peak area or peak height may be used to calculate CFs used in the %RSD equation. Five sets of CFs will be generated for the Aroclor 1016/1260 mixture, each set consisting of the CFs for each of the five peaks chosen for this mixture. The single standard for each of the other Aroclors will generate at least three CFs, one for each selected peak, unless a valid five-point calibration is present for a specific Aroclor, in which case five sets of CFs will be generated for the specific Aroclor. Calculate CFs, the Mean CF ($\overline{CF}$), and the %RSD of the CFs for each peak in a selected set of a minimum of 3 major peaks for each Aroclor using Equations 2, 3, and 4." Is updated to: "The linearity of the instrument is determined by calculating a Percent Relative Standard Deviation (%RSD) of the Calibration Factors (CFs). Either peak area or peak height may be used to calculate CFs used in the %RSD equation. Five sets of CFs will be generated for the Aroclor 1016/1260 mixture, each set consisting of the CFs for each of the peaks **(minimum of three)** chosen for this mixture. The single standard for each of the other Aroclors will generate at least three CFs, one for each selected peak, unless a valid five-point calibration is present for a specific Aroclor, in which case five sets of CFs will be generated for the specific Aroclor. **Calibration Factors (CF) for the surrogates must be generated for each of the five calibration standards of Aroclor 1016/1260, or from Aroclor 1016 if analyzed as a separate mixture. The $\overline{CF}$ of each surrogate compound is calculated as the average of the five values.** Calculate CFs, the Mean CF ($\overline{CF}$), and the %RSD of the CFs for each peak in a selected set of a minimum of 3 major peaks for each Aroclor using Equations 2, 3, and 4."

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 9 Exhibit D – Aroclor: Section 9.3.1	The following Section: "Summary of Continuing Calibration Verification (CCV) The analyses of instrument blanks and the required Aroclor CS3 Standard Mixtures (see Section 9.3.2) constitute the calibration verification. Sample (including LCS and MS/MSD) and required blank (method/sulfur cleanup) data are not acceptable unless bracketed by acceptable analyses of instrument blanks and the Aroclor CS3 Standard Mixtures. In cases where a valid five-point initial calibration for the detected Aroclors is required, that initial calibration may be substituted for the opening CCV." Is updated to: "Summary of Continuing Calibration Verification (CCV) **The analyses of instrument blanks and the required Aroclor CS3 Standard Mixtures (see Section 9.3.2) constitute the calibration verification. Sample (including LCS and MS/MSD) and required blank (method/sulfur cleanup) data are not acceptable unless bracketed by acceptable analyses of instrument blanks and the Aroclor CS3 Standard Mixtures."** Note the last sentence in the section is deleted: **"In cases where a valid five-point initial calibration for the detected Aroclors is required, that initial calibration may be substituted for the opening CCV."**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 10 Exhibit D – Aroclor: Section 9.3.2.1	The following section: An instrument blank and Aroclor 1016/1260 CS3 Standard Mixture must bracket one end of a 12-hour period (opening CCV) during which sample and required blank data are collected, and a second instrument blank and the Aroclor 1016/1260 CS3 Standard Mixture must bracket the other end of the 12-hour period (closing CCV). If during any 12-hour period, an Aroclor other than 1016 or 1260 is detected and the 12-hour time period for the five-point initial calibration of the detected Aroclor(s) has elapsed, then an instrument blank and a CS3 standard of the detected Aroclor(s) must bracket both ends of the 12-hour period. If the opening CCV does not meet all technical acceptance criteria, then a new valid five-point initial calibration for the detected Aroclors must be performed before samples containing the detected Aroclors may be analyzed. is updated to: "An instrument blank and Aroclor 1016/1260 CS3 Standard Mixture must bracket one end of a 12-hour period (opening CCV) during which sample and required blank data are collected, **a second instrument blank, Aroclor 1016/1260 CS3 and CS3 Standard Mixture (s) of any other detected Aroclor (s) must bracket the other end of a 12-hour period (closing CCV). Each opening CCV must include an instrument blank and Aroclor 1016/1260 CS3 standard, additional Aroclor CS3 standards may be performed at the laboratory's discretion. If a valid five-point calibration is available for Aroclor (s) other than 1016/1260, an opening CCV with an instrument blank and Aroclor 1016/1260 CS3 is sufficient, however, the closing CCV must *include* all Aroclors detected and meet opening CCV technical acceptance criteria in Section 9.3.5.3.**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 11 Exhibit D – Aroclor: Section 9.3.2.2	For the 12-hour period immediately following the initial calibration sequence, the instrument blank is the last step in the initial calibration sequence and brackets the front end of that 12-hour period. The injection of the instrument blank starts the beginning of the 12-hour period (Section 10.3.2.1.1), followed by the injection of the Aroclor 1016/1260 CS3 Standard. Samples (including LCSs and MS/MSDs) and required blanks (method/sulfur cleanup) may be injected for 12 hours from the injection of the instrument blank. The first injections immediately after that 12-hour period must be an instrument blank and the Aroclor 1016/1260 CS3 Standard Mixture. The instrument blank must be analyzed first, before the standard. Is updated to: "The injection of **an** instrument blank starts the beginning of the 12-hour period (Section 10.3.2.1.1), followed by the injection of Aroclor 1016/1260 CS3 Standard **and any additional CS3 Standard Mixture(s) as determined by the laboratory**. Samples (including LCSs and MS/MSDs) and required blanks (method/sulfur cleanup) may be injected for 12 hours from the injection of the instrument blank. The first injections immediately after **the previous** 12-hour period must be an instrument blank, Aroclor 1016/1260 CS3 Standard **and CS3 Standard Mixture(s) of any other detected Aroclor. A closing CCV must bracket the end of a 12-hour sequence.**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 12 Exhibit D – Aroclor: Section 9.3.2.3	The following Section: "The analyses of the instrument blank and CS3 Standard Mixture (closing CCV) immediately following one 12-hour period may be used to begin the subsequent 12-hour period as an opening CCV, provided that they meet the technical acceptance criteria in Section 9.3.5. In that instance, the subsequent 12-hour period must be bracketed by the acceptable analyses of an instrument blank and a CS3 Standard Mixture (closing CCV), in that order. Those two analyses may in turn be used to bracket the front end of yet another 12-hour period (opening CCV). This progression may continue every 12 hours until such time as any of the instrument blanks or the CS3 Standard Mixture fails to meet the technical acceptance criteria in Section 9.3.4, or an Aroclor has been detected in a sample for which the corresponding CS3 standard was not performed for the opening CCV. The 12-hour time period begins with the injection of the instrument blank." is updated to: "The analyses of the instrument blank and CS3 Standard Mixture*(s)* (closing CCV) immediately following one 12-hour period may be used to begin the subsequent 12-hour period as an opening CCV, provided that they meet the technical acceptance criteria in Section 9.3.5. In that instance, the subsequent 12-hour period must be bracketed by the acceptable analyses of an instrument blank and a CS3 Standard Mixture*(s)* (closing CCV), in that order. Those two analyses may in turn be used to bracket the front end of yet another 12-hour period (opening CCV). This progression may continue every 12 hours until such time as any of the instrument blanks or the **required** CS3 Standard Mixture (s) fails to meet the technical acceptance criteria in **Section 9.3.5**.
Aro-Item 13 Exhibit D – Aroclor: Section 9.3.2.4	The following section is deleted: **"If more than 12 hours have elapsed since the injection of the instrument blank that bracketed a previous 12-hour period, an acceptable instrument blank and an Aroclor 1016/1260 CS3 standard must be analyzed in order to start a new sequence. This requirement applies even if no analyses were performed since that standard was injected."**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 14 Exhibit D – Aroclor: Section 9.3.2.5	The following Section: "The requirements for running the instrument blanks and CS3 Aroclor 1016/1260 Standard Mixture are waived when no samples (including LCSs and MS/MSDs), dilutions, reanalyses, or required blanks (method/sulfur cleanup) are analyzed during that 12-hour period. To resume analysis, using the existing initial calibration, the Contractor must first analyze an instrument blank and CS3 Aroclor 1016/1260 Standard that meet the technical acceptance criteria." Is updated to: "The requirements for running the instrument blanks and CS3 Aroclor 1016/1260 Standard Mixture are waived when no samples (including LCSs and MS/MSDs), dilutions, reanalyses, or required blanks (method/sulfur cleanup) are analyzed during that 12-hour period. To resume analysis, using the existing initial calibration, the Contractor must first analyze an **opening CCV that consist of** an instrument blank, Aroclor 1016/1260 CS3 Standard, **and any additional CS3 Aroclor Standard (s)** that meet the technical acceptance criteria. **Note: Additional opening CCV CS3 Aroclor Standard (s) determined to be necessary are at the laboratory's discretion."**
Aro-Item 15 Exhibit D – Aroclor: Section 9.3.2.5	The current "Section 9.3.2.5" is updated to "**Section 9.3.2.4**".
Aro-Item 16 Exhibit D – Aroclor: Section 9.3.2.6	The following Section: "If the entire 12-hour period is not required for the analyses of all samples and blanks to be reported and all data collection is to be stopped, the sequence must be ended with the instrument blank/CS3 Aroclor Standard Mixture (s) (1016/1260 and all detected Aroclors) combination." is updated to: "If the entire 12-hour period is not required for the analyses of all samples and blanks to be reported and all data collection is to be stopped, the sequence must **end with an appropriate closing CCV combination, that is, an instrument blank/CS3 Aroclor 1016/1260 and all detected Aroclor CS3 Standard Mixture(s)**."
Aro-Item 17 Exhibit D – Aroclor: Section 9.3.2.6	The current "Section 9.3.2.6" is updated to "**Section 9.3.2.5**".
Aro-Item 18 Exhibit D – Aroclor: Section 9.3.2.7	The following Section: "No more than 14 hours may elapse from the injection beginning the opening CCV (instrument blank) and the injection ending the closing CCV (Aroclor Standard)." Is updated to: "No more than 14 hours may elapse from the injection beginning the opening CCV (instrument blank) and the injection ending the closing CCV (Aroclor Standard). **If more than 12 hours elapse between the injections of the two instrument blanks (opening and closing CCV) that bracket a 12-hour period in which samples or required blanks are analyzed, then the time between the injection of the instrument blank (closing CCV) and the preceding sample may not exceed the length of one chromatographic run."**

Aro-Item 19 Exhibit D – Aroclor: Section 9.3.2.7	**The current "Section 9.3.2.7" is updated to "Section 9.3.2.6".**
Aro-Item 20 Exhibit D – Aroclor: Section 9.3.4	The following Section: "Calculations for Calibration Verification For each analysis of the CS3 Individual Standard Mixture(s) used to demonstrate calibration verification, calculate the Percent Difference between the CF of each Aroclor peak (including the surrogates) in the standard mixture and the $\overline{CF}$ from the initial calibration, using Equation 5." is updated to: "Calculations for Calibration Verification For each analysis of the CS3 Individual Standard Mixture(s) used to demonstrate calibration verification, calculate the Percent Difference between the CF of each Aroclor peak **in the standard mixture and the $\overline{CF}$ from the initial calibration, using Equation 5. Calculate the Percent Difference between CF of surrogates in each standard mixture and the $\overline{CF}$ from the initial calibration of Aroclor 1016/1260 or 1016 if analyzed as a separate mixture, using Equation 5."**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 21 Exhibit D – Aroclor: Section 9.3.5.3	The following Section: "For the opening CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV standard must not exceed ±15%. For the closing CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV must not exceed ±50%. If the Percent Difference for the closing CCV is ±15% or less, then it can be used for the opening CCV of the next 12-hour period." is updated to: "For the opening CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV standard must not exceed ±15%. For the closing CCV, Percent Difference for each Aroclor peak and surrogates calculated from the CCV must not exceed ±50%. If the Percent Difference for the closing CCV is ±15% or less, then it can be used for the opening CCV of the next 12-hour period. **Note: When a required closing CCV of an Aroclor other than Aroclor 1016/1260 is preceded by an opening CCV of Aroclor 1016/1260 CS3 only, the percent difference of each Aroclor peak and surrogate compound must not exceed ± 15%."**
Aro-Item 22 Exhibit D – Aroclor: Section 9.3.6.7	The following Section: "If a successful instrument blank and Aroclor 1016/1260 standard cannot be run after an interruption in analysis (Section 9.3.2.6), an acceptable initial calibration must be run before sample data may be collected. All acceptable sample (including LCS and MS/MSDs) and required blank (method/sulfur cleanup) analyses must be preceded and followed by acceptable standards and instrument blanks, as described in Section 9.3.2." is updated to: "If a successful instrument blank and Aroclor 1016/1260 standard cannot be run after an interruption in analysis (Section 9.3.2.6), an acceptable initial calibration must be run before sample data may be collected. All acceptable sample (including LCS and MS/MSDs) and required blank (method/sulfur cleanup) analyses must be preceded and followed by acceptable instrument blanks and standards **(opening and closing CCV)** as described in Section 9.3.2."
Aro-Item 23 Exhibit D - Aroclor: Section 10.2.2.3.1	The following Section: "Using a syringe or a volumetric pipet, transfer all of the hexane extract to a 10mL vial and, in a fume hood, carefully add 5mL of the 1:1 (v/v) sulfuric acid/water solution." is updated to: "Using a syringe or a volumetric pipet, transfer **an aliquot (1 or 2 mL)** of the hexane extract to a 10mL vial and, in a fume hood, carefully add 5mL of the 1:1 (v/v) sulfuric acid/water solution."
Aro-Item 24 Exhibit D – Aroclor: Section 10.2.2.3.1 and 10.2.2.3.2	The following Sections will be switched: The language for the updated sentence of Section 10.2.2.3.1 will become Section 10.2.2.3.2 and vice versa.

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 25 Exhibit D – Aroclor: Section 10.3.2.1	The following Section: "Analytical Sequence All acceptable samples must be analyzed within a valid analysis sequence as given below: Time / Injection # / Material Injected 1-12 / First 12 steps of the initial calibration 0 hr. / 13 / Instrument blank Aroclor 1016/1260 14 / Standard Sample 12 hr. / Last sample 1st injection past 12 hr. / Instrument blank Aroclor 1016/1260 2nd injection past 12 hr. / standard Subsequent samples Another 12 hrs. / Last sample 1st injection past 12 hr. / Instrument blank Aroclor 1016/1260 2nd injection past 12 hr. / standard 3rd injection past 12 hr. / Sample is updated to: "Analytical Sequence All acceptable samples must be analyzed within a valid analysis sequence as given below: **Time** / **Injection #** / **Material Injected** 1-12 **(or 5-points of all Aroclors)** / First 12 steps of theinitial calibration (or 5-points of all Aroclors) 0 hr. / 13 / Instrument blank 14 / Aroclor 1016/1260 Standard ***15*** / **Additional Aroclor CS3 Standard (optional)** ***16*** / **Subsequent Samples** 12 hr. / Last sample 1st injection past 12 hr. / Instrument blank 2nd injection past 12 hr. / ***Aroclor 1016/1260 Standard*** **3rd injection past 12 hr.** / **Detected Aroclor CS3 Standard *(as required)*** **14 hr.** / **4th injection past 12 hr.** / **Detected Aroclor CS3 Standard *(as required)*** Another 12 hrs. / Subsequent Samples Last sample 1st injection past 12 hr. / Instrument blank 2nd injection past 12 hr. / Aroclor 1016/1260 standard 3rd injection past 12 hr. / Sample

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 26 Exhibit D – Aroclor: Section 10.3.2.1.1	The following Section: "The first 12 hours are counted from injection #13, not from injection #1. Samples may be injected until 12:00 hours have elapsed. All subsequent 12-hour periods are timed from the injection of the instrument blank that brackets the front end of the samples. If more than 12 hours elapse between the injections of two instrument blanks that bracket a 12-hour period in which samples or required blanks are analyzed, then the time between the injection of the instrument blank and the preceding sample may not exceed the length of one chromatographic run. While the 12-hour period may not be exceeded, the laboratory may run instrument blanks and standards more frequently, for instance, to accommodate staff working on 8-hour shifts. No more than 14 hours may elapse from the injection beginning the opening CCV (instrument blank) and the injection ending the closing CCV (Aroclor Standard)." is updated to: **"Injections #1 through #12 in Section 10.3.2.1 may be expanded to include all injections of initial calibration standards as specified in Option 2 and 3 in Section 9.2.3.5.** The first 12 hours are counted from injection #13, not from injection #1, **in the initial calibration sequence Option 1 detailed in Section 10.3.2.1. Alternately, the first 12 hours will be counted from the injection of the instrument blank of an opening CCV when performed immediately after completion of the initial calibration Options 2 and 3.** Samples may be injected until 12:00 hours have elapsed. All subsequent 12-hour periods are timed from the injection of the instrument blank that brackets the front end of the samples. If more than 12 hours elapse between the injections of two instrument blanks that bracket a 12-hour period in which samples or required blanks are analyzed, then the time between the injection of the instrument blank and the preceding sample may not exceed the length of one chromatographic run. While the 12-hour period may not be exceeded, the laboratory may run instrument blanks and standards more frequently, for instance, to accommodate staff working on 8-hour shifts. No more than 14 hours may elapse from the injection beginning the opening CCV (instrument blank) and the injection ending the closing CCV (Aroclor Standard)."

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 27 *Exhibit D – Aroclor: Section 10.3.3.2*	*The following:* *"If the **response** of the largest peak for any Aroclor is greater than the **response** of the same peak in the high-point standard in the initial calibration for both columns, then the sample must be diluted to have the **response** of the largest peak of the lower of the two column analyses be between the low and high calibration standards."* *Is updated to:* *"If the **concentration** of the largest peak for any Aroclor is greater than the **concentration** of the same peak in the high-point standard in the initial calibration for both columns (the largest peak on the second column may be a different peak), then the sample must be diluted to have the **concentration** of the largest peak of the lower of the two column analyses be between the low and high calibration standards."*
Aro-Item 28 *Exhibit D – Aroclor: Section 10.3.3.8*	The following: "Use the results of the original analysis to determine the approximate DF required to get the largest analyte peak (for the lower of the two column ***responses***) within the initial calibration range." Is updated to: "Use the results of the original analysis to determine the approximate DF required to get the largest analyte peak (for the lower of the two column ***concentrations***) within the initial calibration range."
Aro-Item 29 Exhibit D – Aroclor: Section 11.1.1.4	The following Section: "When an Aroclor other than 1016 or 1260 is detected in a sample, a valid five-point calibration curve specific to that Aroclor must be run, followed by reanalysis of the sample or appropriately diluted sample with the detected Aroclor present. The Mean Calibration Factor (CF) will be used to quantitate the analyte in the sample." is updated to: "When an Aroclor other than 1016 or 1260 is detected in a sample, **using a single point calibration,** a valid five point calibration of the specific Aroclor must be **performed**, followed by reanalysis of the sample or appropriately diluted sample **(if the sample concentration of Aroclor exceeded calibration)** with the Aroclor detected initially. **If a valid five-point calibration curve is available for an Aroclor other than 1016 or 1260, the Mean Calibration Factor ($\overline{CF}$) will be used for quantitation of the Aroclor in the sample, however, quantitation of the surrogate compounds using *surrogate data from* the initial five-point Aroclor 1016/1260 or from Aroclor 1016 if analyzed as a separate mixture.** **Note: An estimated concentration (reported with an "S" flag) of the initial detection for an Aroclor other than 1016 or 1260, using a single point calibration standard will be quantitated using the Calibration Factor (CF), of at least 3 major peaks, from the specific single point calibration standard. The surrogates will be quantitated using the initial five-point Aroclor 1016/1260 or from Aroclor 1016 if analyzed as a separate mixture.**

EXHIBIT/SECTION(S)	MODIFICATION (S)

Aro-Item 30

Exhibit D – Aroclor: Section 11.2.1.1.1, Equation 7

The equation is further expanded to allow for greater flexibility in the preparation and cleanup steps as follows:

$$\text{Concentration } \mu g/L = \left(\frac{A_x}{\overline{CF}}\right)\left(\frac{DF}{V_i}\right)\left(\frac{V_t}{V_o}\right)\left(\frac{CV_{out}}{CV_{in} \times E}\right)_1\left(\frac{CV_{out}}{CV_{in} \times E}\right)_2 \cdots \left(\frac{CV_{out}}{CV_{in} \times E}\right)_n$$

where,

A_x = Peak area or peak height of the compound to be measured.

$\overline{CF}$ = Mean Calibration Factor determined from the initial calibration for the compound to be measured, in area/ng.

DF = Dilution Factor.

V_i = Volume of extract injected in µL.

V_t = Volume of extract produced by the preparation process (extraction and concentration), and before cleanup, in µL.

V_o = Volume of the original water sample extracted in mL. Note: for instrument blanks and sulfur blanks assume a volume of 1000mL.

CV_{out} = Volume of extract produced by a cleanup process (cleanup and concentration), in µL.

CV_{in} = Volume of extract subjected to a cleanup process, in µL.

E = The efficiency of the cleanup process expressed as a fraction of material that passes through or is not mechanically lost during the cleanup step (e.g. 50% efficiency must be expressed as 0.50)

Aro-Item 31

Exhibit D – Aroclor: Section 11.2.1.2.1, Equation 9

The equation is further expanded to allow for greater flexibility in the preparation and cleanup steps as follows:

$$\text{Concentration } \mu g/kg = \left(\frac{A_x}{\overline{CF}}\right)\left(\frac{DF}{V_i}\right)\left(\frac{V_t}{W_t \times D}\right)\left(\frac{CV_{out}}{CV_{in} \times E}\right)_1\left(\frac{CV_{out}}{CV_{in} \times E}\right)_2 \cdots \left(\frac{CV_{out}}{CV_{in} \times E}\right)_n$$

where,

***A_x, $\overline{CF}$, DF, V_i, V_t, CV_{out}, CV_{in}, and E** are the same as Equation 7 above.*

W_t = Weight of the original soil sample extracted in g.

$$D = \frac{100 - \%\text{Moisture}}{100}$$

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 32 Exhibit D – Aroclor: Section 11.2.2	The following Section: "Target Compounds The quantitation of Aroclors must be accomplished by comparing the heights or the areas of each of a minimum of 3 major peaks of the Aroclor in the sample with the $\overline{CF}$ for the same peaks established during the specific five-point calibration. The concentration of multi-component analytes is calculated by using Equations 7 and 9, where A_x is the area for each of the major peaks of the Aroclor. The concentration of each peak is determined and then a mean concentration for a minimum of 3 major peaks is determined on each column." is updated to: "Target Compounds **Except for an estimated value reported for an Aroclor other than 1016 or 1260,** The quantitation of Aroclors must be accomplished by comparing the heights or the areas of each of a minimum of 3 major peaks of the Aroclor in the sample with the $\overline{CF}$ for the same peaks established during the specific five-point calibration. The concentration of multi-component analytes is calculated by using Equations 7 and 9, where A_x is the area for each of the major peaks of the Aroclor. The concentration of each peak is determined and then a mean concentration for a minimum of 3 major peaks is determined on each column."
Aro-Item 33 Exhibit D – Aroclor: Section 11.2.2.1	The following Section: "Note that the $\overline{CF}$s used for the quantitation of Aroclors are the $\overline{CF}$s from the concentration of the specific five-point calibration." is updated to: **"To quantitate and report the estimated concentration of an Aroclor other than 1016 or 1260, use the Calibration Factor (CF) for a minimum of 3 major peaks, from the single point Aroclor calibration standard used for the Aroclor pattern recognition. It will be necessary to substitute the single Calibration Factor (CF) for the Mean CF ($\overline{CF}$) in Equations 7, 8, 9 and 10.** **Note: The** $\overline{CF}$s used for the quantitation of **target** Aroclors are the $\overline{CF}$s from the concentration of the specific five-point calibration."

EXHIBIT/SECTION(S)	MODIFICATION (S)

Aro-Item 34

Exhibit D – Aroclor: Section 11.2.3.1, Equation 12

The equation is further expanded to allow for greater flexibility in the preparation and cleanup steps as follows:

EQ. 12 Adjusted CRQL Calculation for Water Samples

$$\text{Adjusted CRQL} = (\text{Contract CRQL})\left(\frac{V_x}{V_o}\right)\left(\frac{V_t}{V_y}\right)(DF)\left(\frac{CV_{out}}{CV_{in}\times E}\right)_1\left(\frac{CV_{out}}{CV_{in}\times E}\right)_2\cdots\left(\frac{CV_{out}}{CV_{in}\times E}\right)_n$$

where,

Contract CRQL	=	**The CRQL value reported in Exhibit C – Aroclors (µg/L).**
V_x	=	**Contract sample volume (1000 mL).**
V_o	=	**Volume of water extracted in mL. Note: for instrument and sulfur blanks assume a volume of 1000mL.**
V_t	=	**Volume of water *concentrated extract* in µL.**
V_y	=	**Contract concentrated extract volume (10,000 µL).**
DF	=	**Dilution Factor.**
CV_{out}	=	**Volume of extract produced by a cleanup process (cleanup and concentration), in µL.**
CV_{in}	=	**Volume of extract subjected to a cleanup process, in µL.**
E	=	**The efficiency of the cleanup process expressed as a fraction of material that passes through or is not mechanically lost during the cleanup step (e.g. 50% efficiency must be expressed as 0.50).**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 35 Exhibit D – Aroclor: Section 11.2.3.2 Equation 13 The equation is further expanded to allow for greater flexibility in the preparation and cleanup steps as follows: **EQ. 13 Adjusted CRQL Calculation for Soil/Sediment Samples** $$\text{Adjusted CRQL} = (\text{Contract CRQL})\left(\frac{W_x}{W_s \times D}\right)\left(\frac{V_t}{V_y}\right)(DF)\left(\frac{CV_{out}}{CV_{in} \times E}\right)_1\left(\frac{CV_{out}}{CV_{in} \times E}\right)_2 \cdots \left(\frac{CV_{out}}{CV_{in} \times E}\right)_n$$ **where,** **Contract CRQL = The CRQL value reported in Exhibit C – Aroclors (µg/Kg).** **W_x = Contract sample weight (30 g).** **W_s = Weight of sample extracted in grams (g).** **D = $\frac{100 - \%\text{Moisture}}{100}$** **$V_t$ = Volume of the concentrated extract in µL.** **V_y = Contract concentrated extract volume (10,000 µL).** **DF = Dilution Factor.** **CV_{out} = Volume of extract produced by a cleanup process (cleanup and concentration), in µL.** **CV_{in} = Volume of extract subjected to a cleanup process, in µL.** **E = The efficiency of the cleanup process expressed as a fraction of material that passes through or is not mechanically lost during the cleanup step (e.g. 50% efficiency must be expressed as 0.50).**	
Aro-Item 36 Exhibit D – Aroclor: Section 11.2.4	The following Section : "The concentrations for surrogate compounds can be calculated by using Equation 7 (for waters) and Equation 9 (for soils) and the $\overline{CF}$ from the most recent initial calibration." is updated to: "The concentrations for surrogate compounds can be calculated by using Equation 7 (for waters) and Equation 9 (for soils) and the $\overline{CF}$ from **a valid initial five-point calibration of Aroclor 1016/1260 or from Aroclor 1016 if analyzed as a separate mixture."**

EXHIBIT/SECTION(S)	MODIFICATION (S)
Aro-Item 37 Exhibit D – Aroclor: Section 11.3.5	The following Section: "The RT for each of the surrogates must be within the RT window (Section 9.2.4.3) for both GC columns." is updated to: **"Surrogate compounds Retention Time (RT) must be compared to the window established during a valid initial five-point calibration of Aroclor 1016/1260 or from Aroclor 1016 if analyzed as a separate mixture.** The RT for each of the surrogates must be within the RT window (Section 9.2.4.3) for both GC columns."
Aro-Item 38 Exhibit D – Aroclor: Section 12.3.4.2	The following Section: "Calculate individual compound recoveries of the LCS using Equation 14" is updated to: "Calculate individual compound recoveries of the LCS using **Equation 15**".